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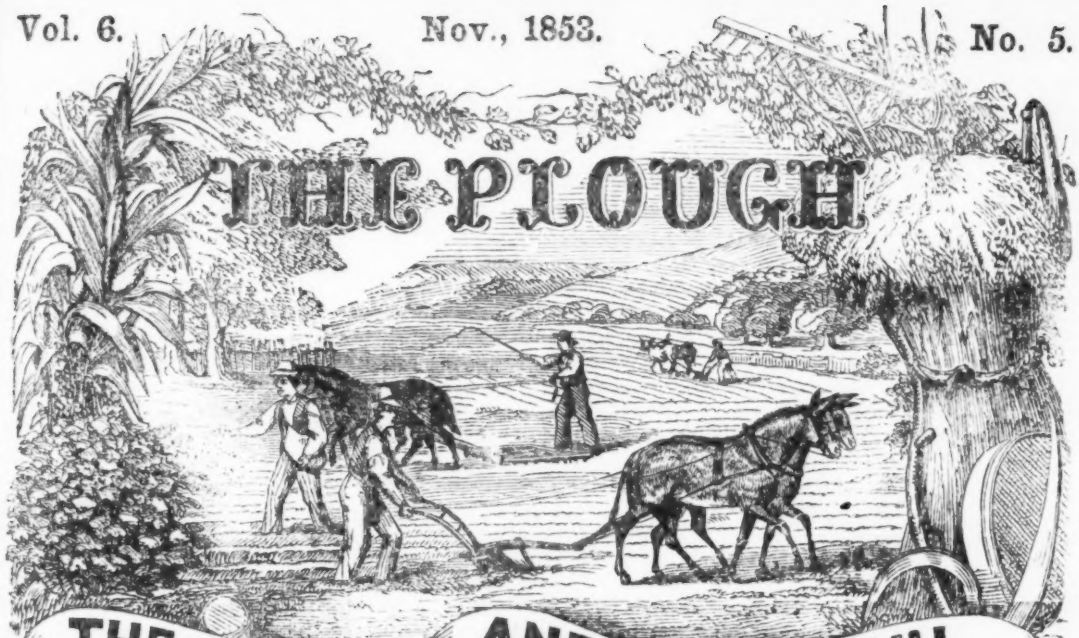
THE PLOUGH



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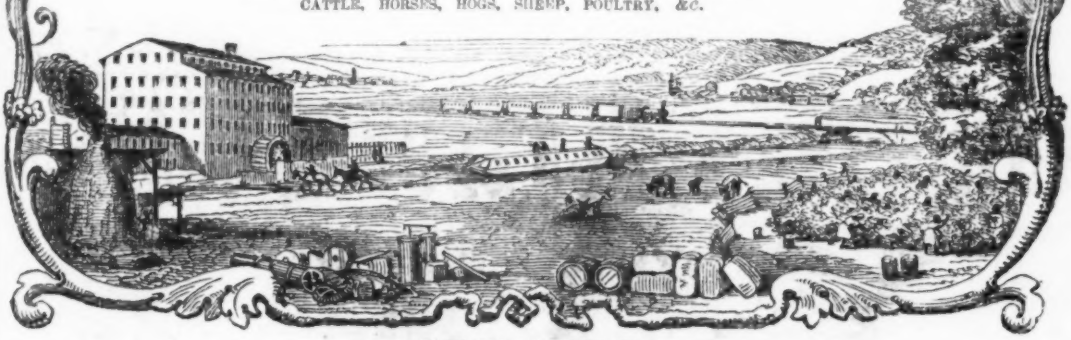
FARMER AND MECHANIC.

DEVOTED TO SCIENTIFIC AND PRACTICAL AGRICULTURE—MANUFACTURES—MECHANICS—NEW INVENTIONS—A SOUND PROTECTIVE POLICY—FARM BUILDINGS—COTTAGE DESIGNS—FRUIT TREES—FLOWERS—GARDENING—BEES, CATTLE, HORSES, HOGS, SHEEP, POULTRY, &c.



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The Plough, the Loom, and the Anvil.

PART I.—VOL. VI. NOVEMBER, 1853. No. 5.

RUSSIAN INDUSTRY.

RUSSIA at the present day is "the observed of all observers." Her position among the monarchies of the old world gives to her an importance which attaches to no other sovereignty on that continent. *What she is to be and to do*, is quite as important an inquiry, to say the least, as *what may be the condition and policy of England.* At the same time, we know less of Russia than of almost any other country. Few travellers, comparatively, have qualified themselves for extensive details, and in several departments of interesting inquiry, our information is very limited. Still, we have in late years quite important and reliable statements of the manners, customs, and institutions of that people, and we may serve a double purpose by presenting some of these to our readers. We may show the connection between variety of pursuit and general progress, as we have so often done with the statistics of other countries, while we also furnish a sketch of no little interest, which shall familiarize our readers with that to which they have not, in general, convenient access. We rely, to a great extent, upon extracts from authors cited by Mr. Carey, in his new work on the Slave Trade, and his remarks in the same connection, while we add information from other sources as we may be able.

"'The industry of Russia,' says a recent American journal, 'has been built up, as alone the industry of a nation can be, under a system of protection, from time to time modified as experience has dictated; but never destroyed by specious abstractions or the dogmas of mere doctrinaires. Fifty years ago, manufactures were unknown there, and the caravans trading to the interior, and supplying the wants of distant tribes in Asia, went laden with the products of British and other foreign workshops. When the present Emperor mounted the throne, in 1825, the country could not produce the cloth required to uniform its own soldiers; farther back, in 1800, the exportation of colored cloth was prohibited under severe penalties; but through the influence of adequate protection, as early as 1834, Russian cloth was taken by the caravans to Kiachta; and at this day the markets of all Central Asia are supplied by the fabrics of Russian looms, which in Affghanistan and China are crowding British cloths entirely out of sale—notwithstanding the latter have the advantage in transportation—while in Tartary and Russia itself British woollens are now scarcely heard of. In 1812 there were in Russia, 136 cloth factories; in 1824, 324; in 1812 there were 129 cotton factories; in 1824, 484. From 1812 to 1839 the whole number of manufacturing establishments in the empire more than trebled, and since then they have increased in a much greater ratio, though from the absence of official statistics we are not able to give the figures. Of

the total amount of manufactured articles consumed in 1843, but one sixth were imported. And along with this vast aggrandizement of manufacturing industry and commerce, there has been a steady increase in both imports and exports, as well as of revenue from customs. The increase of imports has consisted of articles of luxury and raw materials for manufacture. And, as if to leave nothing wanting in the demonstration, the increase of exports has constantly included more and more of the products of agriculture. Thus in this empire we see what we must always see under an adequate and judicious system of protection, that a proper tariff not only improves, refines, and diversifies the labor of the country, but enlarges its commerce, increases the prosperity of its agricultural population, renders the people better and better able to contribute to the support of the Government, and raises the nation to a position of independence and real equality among the powers of the globe. All this is indubitably proved by the example of Russia, for there protection has been steady and adequate, and the consequences are what we have described.'—*New-York Tribune.*

The reader, says Mr. Carey, may advantageously compare the following sketch, from the same source, of the present position of Russia, so recently a scene of barbarism, with that already laid before him, of her neighbor, Turkey, whose policy commands to so great an extent the admiration of those economists who advocate the system which looks to converting the whole world outside of England into one vast farm, and all its people, men, women, and children, into field laborers, dependent on one great workshop, in which to make all their exchanges:

'Russia, we are told, is triumphant in the Great (London) Exhibition. Her natural products excite interest and admiration for their variety and excellence; her works of art provoke astonishment for their richness and beauty. Her jewellers and gold-workers carry off the palm from even those of Paris. Her satins and brocades compete with the richest contributions of Lyons. She exhibits tables of malachite and caskets of ebony, whose curious richness indicates at once the lavish expenditure of a barbaric court, and the refinement and taste of civilization. Nor do we deem it of much account that her part of the exhibition is not exclusively the work of native artisans. Her satins are none the less genuine product of the country because the loveliest were woven by emigrants from the *Croix Rousse* or the *Guillotière*, seduced by high wages from their sunnier home in order to build up the industry of the Great Empire, and train the grandsons of Mongol savages in the exquisite mysteries of French taste and dexterity. It matters not that the Exhibition offers infinitely more than a fair illustration of the average capacity of Russian labor. It is none the less true that a people who, half a century ago, were without manufactures of any but the rudest kind, are now able by some means to furnish forth an unsurpassed display, though all the world is there to compete with them.

We are no lover of Russian power, and we have no wish to exaggerate the degree of perfection to which Russian industry has attained. We do not doubt that any cotton factory in the environs of Moscow might be found imperfect when contrasted with one of Manchester or Lowell. We are confident that the artisans of a New-England village very far surpass those of a Russian one in most qualities of intelligence and manhood. Indeed, it is absurd to make the comparison; it is absurd to do what travellers insist on doing—that is, to judge every nation by the highest standard, and pronounce each a failure which does not exhibit the intellect of France, the solidity and power of England, or the enterprise, liberty, and order of the United States.

All that should be asked is, whether a people has surpassed its own previou condition, and is in the way of improvement and progress. And that, in respect of industry at least, Russia is in that way, her show at the Exhibition may safely be taken as a brilliant and conclusive proof.

Russia is powerful, and is becoming more so daily. Why is it so? It is because her people are daily more and more learning the advantages of diversification of labor and combination of exertion, and more and more improving in their physical and intellectual condition—the necessary preliminaries to an improvement of their political condition. Turkey is weak; and why is it so? Because among her people the habit of association is daily passing away as the few remaining manufactures disappear, and as the travelling pedler supersedes the resident shopkeeper.

It is said, however, that Russian policy is unfavorable to commerce; but is not its real tendency that of producing a great internal commerce, upon which alone a great foreign one can be built? That it does produce the effect of enabling her people to combine their exertions for their common benefit is most certain; and equally so that it tends to give her that direct intercourse with the world which is essential to the existence of freedom. The slave trades with the world through his master, who fixes the price of the labor he has to sell and the food and clothing he has to buy, and this is exactly the system that Great Britain desires to establish for the farmers of the world—she being the only buyer of raw products, and the only seller of manufactured ones.

So long as Russia exports only food and hemp, she can trade with Brazil for sugar, and with Carolina for cotton, only through the medium of British ships, British ports, British merchants, and British looms, for she can need no raw cotton; but with the extension of manufactures she needs cotton, which she can draw directly from the planter, paying him in iron, by aid of which he may have machinery. In illustration of this, we have the fact that so recently as in 1846, out of a total consumption of cotton amounting to 310,656 cwts., no less than 122,082 cwts. had passed through British spindles; whereas in 1850, out of a total consumption of more than one half greater, amounting to 487,612 cwts., only 64,505 cwts. had passed through the hands of the spinners of Manchester.

The export of raw cotton to Russia has since largely increased, but the precise extent of increase cannot be ascertained, although some estimate may be formed from the growth of the consumption of one of the principal dyeing materials, indigo; the export of which from England to Russia is thus given in the London *Economist*:

	1849.	1850.	1851.	1852.
Chests,	3225.....	4105.....	4953.....	5175

We have here an increase in three years of almost sixty per cent., proving a steady increase in the power to obtain clothing and to maintain commerce internal and external; directly the reverse of what has been observed in Turkey, Ireland, India, and other countries in which the British system prevails; and the reason of this is, that that system looks to destroying the power of association. It would have all the people of India engage themselves in raising cotton, and all those of Brazil and Cuba in raising sugar, while those of Germany and Russia should raise food and wool; and we know well that when all are farmers, or all planters, the power of association scarcely exists; the consequence of which is seen in the exceeding weakness of all the communities of the world in which the plough and the loom, the hammer and

the harrow, are prevented from coming together. It is an unnatural one. Men every where seek to combine their exertions with those of their fellow-men; an object sought to be attained by the introduction of that diversification of employment advocated throughout his work by the author of *The Wealth of Nations.* How naturally the habit of association arises, and how beneficial are its effects, may be seen from a few extracts now offered to the reader, from an interesting article in a recent English journal. In Russia, says its author,

'There does not prevail that marked distinction between the modes of life of the dwellers in town and country which is found in other countries; and the general freedom of trade, which in other nations is still an object of exertion, has existed in Russia since a long by-gone period. A strong manufacturing and industrial tendency prevails in a large portion of Russia, which, based upon the communal system, has led to the formation of what we may term "national association factories."'

In corroboration of this view of the general freedom of internal trade, we are told that, widely different from the system of western Europe,

'There exists no such thing as a trade guild, or company, nor any restraint of a similar nature. Any member of a commune can at pleasure abandon the occupation he may be engaged in, and take up another; all that he has to do in effecting the change is to quit the commune in which his old trade is carried on, and repair to another, where his new one is followed.'

The tendency of manufacturing industry is

'For the most part entirely communal; the inhabitants of one village, for example, are all shoemakers, in another smiths, in a third tanners only, and so on. A natural division of labor thus prevails, exactly as in a factory. The members of the commune mutually assist one another with capital or labor; purchases are usually made in common, and sales also invariably, but they always send their manufactures in a general mass to the towns and market-places, where they have a common warehouse for their disposal.'

In common with all countries that are as yet unable fully to carry out the idea of Adam Smith, of compressing a large quantity of food and wool into a piece of cloth, and thus fitting it for cheap transportation to distant markets, and which are, therefore, largely dependent on those distant markets for the sale of raw produce, the cultivation of the soil in Russia is not,

'In general, very remunerative, and also can only be engaged in for a few months in the year, which is, perhaps, the reason why the peasant in Russia evinces so great an inclination for manufactures and other branches of industry, the character of which generally depends on the nature of raw products found in the districts where they are followed.'

Without diversification of employment, much labor would be wasted, and the people would find themselves unable to purchase clothing or machinery of cultivation. Throughout the empire, the laborer appears to follow in the direction indicated by nature, working up the materials on the land on which they are produced, and thus economizing transportation. Thus,

'In the government of Yaroslaf the whole inhabitants of one place are potters. Upwards of two thousand inhabitants of another place are rope-makers and harness-makers. The population of the district of Uglitich, in 1835, sent three millions of yards of linen cloth to the markets of Rybeeck and Moscow. The peasants on one estate are all candle-makers, on a second they are all manufacturers of felt hats, and on a third they are solely occupied in smiths' work, chiefly the making of axes. In the district of Pashectee there are about seventy tanneries, which give occupation to a large

number of families; they have no paid workmen, but perform all the operations among themselves, preparing leather to the value of about twenty-five thousand roubles a year, and which is disposed of on their account in Rybeeck. In the districts where the forest trees mostly consist of lindens, the inhabitants are principally engaged in the manufacture of matting, which, according to its greater or less degree of fineness, is employed either for sacking or sail-cloth, or merely as packing-mats. The linden tree grows only on moist soils, rich in black *humus*, or vegetable mould; but will not grow at all in sandy soils, which renders it comparatively scarce in some parts of Russia, while in others it grows abundantly. The mats are prepared from the inner bark, and as the linden is ready for stripping at only fifteen years of age, and indeed is best at that age, these trees form a rich source of profit for those who dwell in the districts where they grow.'

We have here a system of combined exertion that tends greatly to account for the rapid progress of Russia in population, wealth, and power.

The men who thus associate for local purposes acquire information, and with it the desire for more; and thus we find them passing freely, as interest may direct them, from one part of the empire to another: a state of things very different from that produced in England by the law of settlement, under which men have every where been forbidden to change their locality, and every where been liable to be seized and sent back to their original parishes, lest they might at some time or other become chargeable upon the new one in which they had desired to find employment, for which they had sought in vain at home. "The Russian," says our author,

'Has a great disposition for wandering about beyond his native place, but not for travelling abroad. The love of home seems to be merged, to a great extent, in love of country. A Russian feels himself at home every where within Russia; and, in a political sense, this rambling disposition of the people, and the close intercourse between the inhabitants of the various provinces to which it leads, contributes to knit a closer bond of union between the people, and to arouse and maintain a national policy and a patriotic love of country. Although he may quit his native place, the Russian never wholly severs the connection with it; and, as we have before mentioned, being fitted by natural talent to turn his hand to any species of work, he in general never limits himself in his wanderings to any particular occupation, but tries at several; but chooses whatever may seem to him the most advantageous. When they pursue any definite extensive trade, such as that of a carpenter, mason, or the like, in large towns, they associate together, and form a sort of trades' association, and the cleverest assume the position of a sort of contractor for the labor required. Thus, if a nobleman should want to build a house, or even a palace, in St. Petersburgh, he applies to such a contractor, (*prodratshnik*,) lays before him the elevation and plans, and makes a contract with him to do the work required for a specified sum. The contractor then makes an agreement with his comrades respecting the assistance they are to give, and the share they are to receive of the profit; after which he usually sets off to his native place, either alone or with some of his comrades, to obtain the requisite capital to carry on the work with. The inhabitants, who also have their share of the gains, readily make up the necessary sum, *and every thing is done in trust and confidence;* it is, indeed, very rare to hear of frauds in these matters. The carpenters (*plotniki*) form a peculiar class of the workmen we have described. As most of the houses in Russia, and especially in the country parts, are built of wood, the number and importance of the carpenters, as a class, are very great in comparison with other coun-

tries. Almost every peasant, whatever other trade he may follow, is also something of a carpenter, and knows how to shape and put together the timbers for a dwelling. The *plotniki* in the villages are never any thing more than these general carpenters, and never acquire any regular knowledge of their business. The real Russian *plotniki* seldom carries any other tools with him than an axe and a chisel, and with these he wanders through all parts of the empire, seeking, and every where finding, work.'

The picture here presented is certainly widely different from that presented by Great Britain and Ireland. A Russian appears to be at home every where in Russia. He wanders where he will, every where seeking and finding work; whereas an Irishman appears hardly to be at home any where within the limits of the United Kingdom. In England, and still more in Scotland, he is not acknowledged as a fellow-citizen. He is *only an Irishman*—one of those half-savage Celts intended by nature to supply the demand of England for cheap labor; that is, for that labor which is to be rewarded by the scantiest supplies of food and clothing. The difference in the moral effect of the two systems is thus very great. The one tends to bring about that combination of exertion which every where produces a kindly habit of feeling, whereas the other tends every where to the production of dissatisfaction and gloom; and it is so because that under it there is necessarily a constant increase of the feeling that every man is to live by the taxation of his neighbor, buying cheaply what that neighbor has to sell, and selling dearly what that neighbor has to buy. The existence of this state of things is obvious to all familiar with the current literature of England, which abounds in exhibitions of the tendency of the system to render man a tyrant to his wife, his daughter, his horse, and even his dog. A recent English traveller in Russia presents a different state of feeling as there existing. 'The Russian coachman,' he says—

'Seldom uses his whip, and generally only knocks with it upon the footboard of the sledge, by way of a gentle admonition to his steed, with whom, meanwhile, he keeps up a running colloquy, seldom giving him harder words than "*My brother—my friend—my little pigeon—my sweetheart.*" "Come, my pretty pigeon, make use of your legs," he will say. "What, now! art blind? Come, be brisk? Take care of that stone, there. Don't see it?—There, that's right! Bravo! hop, hop, hop! Steady boy, steady! What art turning thy head for? Look out boldly before thee!—Hurra! Yukh! Yukh!"

'I could not,' he continues, 'help contrasting this with the offensive language we constantly hear in England from carters and boys employed in driving horses. You are continually shocked by the oaths used. They seem to think the horses will not go unless they swear at them; and boys consider it manly to imitate this example, and learn to swear too, and break God's commandments by taking his holy name in vain. And this, while making use of a fine, noble animal he has given for our service and not for abuse. There is much unnecessary cruelty in the treatment of these dumb creatures, for they are often beaten when doing their best, or from not understanding what their masters want them to do.'

The manner in which the system of diversified labor is gradually extending personal freedom among the people of Russia, and preparing them eventually for the enjoyment of the highest degree of political freedom, is shown in the following passage. 'The landholders,' says the author before referred to—

'Having serfs, give them permission to engage in manufactures, and to seek for work for themselves where they like, on the mere condition of pay-

ing their lord a personal tax, (*obrok.*) Each person is rated, according to his personal capabilities, talents, and capacities, at a certain capital; and according to what he estimates himself capable of gaining, he is taxed at a fixed sum as interest of that capital. Actors and singers are generally serfs, and they are obliged to pay *obrok* for the exercise of their art, as much as the lowest handicraftsman. In recent times the manufacturing system of Western Europe has been introduced into Russia, and the natives have been encouraged to establish all sorts of manufactures on these models; and it remains to be seen whether the new system will have the anticipated effect of contributing to the formation of a middle class, which hitherto has been the chief want in Russia as a political state.'

That such must be the effect cannot be doubted. The middle class has every where grown with the growth of towns and other places of local exchange, and men have become free precisely as they have been able to unite together for the increase of the productiveness of their labor. In every part of the movement which thus tends to the emancipation of the serf, the government is seen to be actively coöperating, and it is scarcely possible to read an account of what is there being done without a feeling of great respect for the Emperor, 'so often,' says a recent writer, 'denounced as a deadly foe to freedom—the true father of his country, earnestly striving to develop and mature the rights of his subjects.' "*

In 1827, an imperial *ukase* put an end to the unlimited sale of the serf as a mere chattel, and declared him an integral and inseparable part of the soil. Another and subsequent *ukase* permitted him to enter into contracts, with power to hold property.

"The free peasants as yet constitute a small class, but they live

'As free and happy men, upon their own land; are active, frugal, and without exception, well off. This they must be, for considerable means are necessary for the purchase of their freedom; and, once free, and in possession of a farm of their own, their energy and industry, manifested even in a state of slavery, are redoubled by the enjoyment of personal liberty, and their earnings naturally increase in a like measure.

'The second class, the crown peasants, are far better off (setting aside, of course, the consciousness of freedom) than the peasants of Germany. They must furnish their quota of recruits, but that is their only material burden. Besides that, they annually pay to the Crown a sum of five roubles (about four shillings) for each male person of the household. Supposing the family to include eight working men, which is no small number for a farm, the yearly tribute paid amounts to thirty-two shillings. And what a farm that must be which employs eight men all the year round! In what country of civilized Europe has the peasant so light a burden to bear? How much heavier those which press upon the English farmer, the French, the German, and above all the Austrian, who often gives up three fourths of his harvest in taxes. If the Crown peasant be so fortunate as to be settled in the neighborhood of a large town, his prosperity soon exceeds that even of the Altenburg husbandmen, said to be the richest in all Germany. On the other hand, he can never purchase his freedom; hitherto, at least, no law of the Crown has granted him this privilege.'—*Jerrmann*, p. 156.

We are told that the policy of Russia is adverse to the progress of civilization, while that of England is favorable to it, and that we should aid the latter in opposing the former. How is this to be proved? Shall we look to

* Pictures from St. Petersburg, by E. Jerrmann, p. 22.

Ireland for the proof? If we do, we shall meet there nothing but famine, pestilence, and depopulation. Or to Scotland, where men, whose ancestors had occupied the same spot for centuries, are being hunted down that they may be transported to the shores of the St. Lawrence, there to perish, as they so recently have done, of cold and of hunger? Or to India, whose whole class of small proprietors and manufacturers has disappeared under the blighting influence of her system, and whose commerce diminishes now from year to year? Or to Portugal, the weakest and most wretched of the communities of Europe? Or to China, poisoned with *smuggled* opium, that costs the nation annually little less than forty millions of dollars, without which the Indian government could not be maintained? Look where we may, we see a growing tendency towards slavery wherever the British system is permitted to obtain; whereas freedom grows in the ratio in which that system is repudiated.

That such must necessarily be the case will be seen by every reader who will for a moment reflect on the difference between the effect of the Russian system on the condition of Russian women, and that of the British system on the condition of those of India. In the former there is every where arising a demand for women to be employed in the lighter labor of conversion, and thus do they tend from day to day to become more self-supporting, and less dependent on the will of husbands, brothers, or sons. In the other the demand for their labor has passed away, and their condition declines; and so it must continue to do while Manchester shall be determined upon closing the domestic demand for cotton, and driving the whole population to the production of sugar, rice, and cotton, for export to England.

The system of Russia is attractive of population, and French, German, and American mechanics of every description find demand for their services. That of England is repulsive, as is seen by the *forced* export of men from England, Scotland, Ireland, and India, now followed by whole cargoes of women* sent out by aid of public contributions, presenting a spectacle almost as humiliating to the pride of the sex as can be found in the slave bazaar of Constantinople."

FOR THE PLOUGH, THE LOOM, AND THE ANVIL.

CROPS AT THE SOUTH.

MESSRS. EDITORS:—In compliance with your request, I now seat me, whilst in at noon, to give you an article for your paper, which, as the spirit moves, will be followed by an occasional article. I now give you some data and inferences as to the present year's crops. The data are sure and reliable. The inferences are my own, given for what they are worth. I have made on this place twenty-three crops, settling on this spot in January, 1831. I began the agriculturist's life by keeping notes of my daily business, and do so now. I began to read agricultural works when I settled here, and so continue. My first article for the press was written 8th of November, 1832, my last is now in hand.

Thus much for myself, that your readers may have some sort of hint who

* The cargo of a ship that has recently sailed is stated to have consisted of more than a thousand females.

the writer is. I am indebted for all I know to agricultural works, and close attention in the plantation; and just here, I beg to say I superintend, usually, all the work on the plantation, not giving orders to my foreman, and sitting in the shade whilst those orders are being executed. I am out with my hands, rain or shine, hot or cold.

There is prevalent an opinion that this crop will be full, or perhaps even over that of the last. That persons interested in the purchase of cotton and of cotton goods may have data, I offer the following as facts which cannot be denied:

The season from 1st March to date, has been a succession of droughts and deluges of rain. By the time the plant would fully recover from too much rain, there would be another wet spell.

All persons conversant with a cotton crop know that extremes do more to destroy a planter's hopes than aught else.

I had more cotton planted in 1852 on 1st of April than I had this year on the 10th. The season had been so wet up to the 10th, that I had to plant old ground too early, and then, when I could plant my new ground, it was too late for a fall crop. The rot began rather earlier than usual last year, but to date, not as bad as when at its worst; say ten days later. To date last year, I had gathered and ginned two bales of cotton per hand, whilst now I have not one bale picked, barely three-fourths, per hand, and none ginned. Last year at this date I was picking full weights. For four days past I have been doing so, but this evening I have not done half work, and the prospect is so for many days. Six of my best hands gathered yesterday—a dry day, and the first this week—1982 lbs., which they could have done at least in half the time last year. For a week at least, I have no idea I can average, with same hands, 2000 lbs. each. The crop on good land is at least two weeks later, on upland rather earlier, yet the bolls are exceeding small on all land. I have heard two others remark that the bolls are smaller and more difficult to pick than they ever knew of before.

Again, our season last year was remarkably fine for ripening and for picking. Many of us were disappointed in our crops, owing to cotton maturing later than usual. Our first nipping frost was 8th of November; the first ice, on the 15th. I have known ice here on 5th and 6th October.

We have already had more rain and more rainy days than we had last fall altogether. This season is more like 1843 than any year I remember. We have had very many heavy, washing rains.

These are facts which I think no one will deny. And to close up this statement in regard to this place, I had in cotton last year 9⅔ acres per hand, and a fraction over; this year, a fraction under 8 acres.

I now give my inferences, and let them go for what they are worth. If this place is a criterion, it would be very difficult, with present prospects and ordinary seasons, to gather the crop made last year. My crop was 9 bales per hand. I would like to know who could gather 8 bales, after this, in ordinary years.

I have not seen much of the growing crop; have heard something; and judging from the light before me, I know of no neighborhood making a crop equal to last year. The rot seems to be more extended, and the boll-worm to be as bad as usual.

My own crop was fine, until the wet weather in July, and yet it was almost as good in August, after the dry weather set in. But the drought, following so much rain, caused a cast of much of the young fruit. The rot, as I said, is not as bad as last year, but we have ten days yet for it to run

its course. The boll-worm is not as bad here as usual. Yet, with a good season, and as late as last year, I cannot make the crop of last year, nor can it grade as high. We should now be gathering our fine cotton, whereas it is any thing else. I will readily pay $1 per bale to any insurance office that will insure me 8 bales per hand, and I will double it for 9 bales. I believe now I would make money by paying $2 per bale for 8. Then apply my case to the entire crop, and there will be a decrease of one ninth certain: 9÷3,200,010=355,555 less, and the crop would be 2,850,000 bales. I conclude that the crop will not exceed 2,800,000 bales. If my facts are right, and this place a fair criterion, I think I will be borne out in my inferences. Many think the supposed deficit of 700,000 bales much too large. I would be willing to meet half way.

Yours, with respect, M. W. PHILIPS.

Edwards, Miss., Sept. 16, 1852.

FOR THE PLOUGH, THE LOOM, AND THE ANVIL.

A FEW DAYS IN CANADA WEST.

THE traveller, on arriving in Hamilton, Canada, will readily notice the great difference between the cities of Canada and of the United States. The buildings in Hamilton are quite scattering, not having the neatness and splendor of those in the cities of the United States, although the city contains a number of large and firm buildings. The city stands one and a half miles from the bay, the ground descending gradually from the city to the lake. The city is built on a diluvial formation, which between the city and the water is of great thickness. The excavation near the city for the Great Western Railroad is one hundred feet deep. The skeleton of a mammoth has been found near Hamilton, seventy feet from the surface.

The price of produce on the 5th of August was, wheat, $1,00; corn, 50c.; oats, 62½c.; butter, 16c.; cheese, 9c.; horses, from $20 to $150; oxen, from $85 to $100 per yoke; cows, $25. It is singular to notice the great difference in prices in Canada of produce within a few miles, often 15 or 20 cents in a bushel of grain. The price of grain and cattle in Canada for the last year or two is nearly as high as in the State of New-York. Formerly the price of wheat was from five to six shillings, and other produce in proportion. The inhabitants of Wentworth, Halton, and Brant counties make much reckoning on the Northern Railroad, running from Lake Huron and intersecting our road near the Falls, and the Western Railroad, beginning opposite Detroit, in Michigan, and terminating in the same region as the Northern Road does. One of these roads—I am not certain which—crosses the Niagara at the upper suspension bridge. The Canadians are calculating that these roads will transport the larger part of the produce of the West. These it is thought will be finished in the early part of next summer. A large number of droves of cattle from the West are driven through Canada annually, making the route to the East much nearer.

The only hill that I noticed in Canada was back of the city of Hamilton. This hill is noticed from the stage-road from Brantford, five or six miles. The Medina sandstone is seen cropping out of the side of the hill back of the city; and the limestone of the Clinton group is seen cropping out about half way between Hamilton and Brantford. I understand that gypsum, or plas-

ter, is found in two places along the Grand River, between Brantford and Paris, and also a short distance above Paris. Almost the whole country appears one great diluvial formation of vast thickness, with scarcely any stone or gravel, with the exception of a few boulders of granite and some of the northern limestone. These boulders are drilled and blasted for underpinning for buildings. The soil, in the parts I visited, is clayey, very deep, and well adapted to wheat. Often 40 bushels per acre are raised. Although Scobie in his Almanac and Register puts the wheat crop of the Province at only 20 bushels per acre, I was informed by my uncle that he had often raised over 40 bushels per acre. His wheat, and that of his neighbor, Mr. D. Christie, yielded over 30 bushels per acre. Mr. Christie, the present member of Parliament for Wentworth District, took the premium at the World's Fair, in London, on blue-stem wheat, and the year after at the Provincial Fair at Toronto. Mr. Christie had the kindness to show me his medals and certificates for prizes on wheat. The varieties of wheat raised, as far as I could learn, were blue-stem and Soland, and a beautiful variety of spring wheat lately from Scotland. The oat crop, in many parts that I visited, was quite short, in consequence of a drought, the most severe they ever have experienced. The oat crop, notwithstanding the drought, was large with many farmers. The variety raised is the Black Maine. A large amount of barley is raised in Canada, which yields largely, and is generally worth from 45c. to 50c. a bushel. There is not much corn raised in Canada; it is a large farmer that raises 10 acres of corn. The grass crop was very large in Canada, yielding generally two tons per acre. The crops are generally half clover and half timothy. Buckwheat is not much raised, but what I noticed was very fine. In general, the barns in Canada were better filled than any barns that I have seen in a number of years.

ROBERT HOWELL.

FOR THE PLOUGH, THE LOOM, AND THE ANVIL.

THE FARM-HOUSE.

MUCH has been written, of late, on the style of architecture best adapted to the wants of the farmer and mechanic. A great change has been effected in the aspect of the farming districts. Neatly-painted cottages are taking the place of weather-beaten, barn-like rookeries. Painted paling fences enclose house-plats and gardens where, before, there was no fence, or but a rude one.

Yet what has been done is but a beginning of what might and ought to be done. Why should not every farm-house be characterized by neatness and good taste? It is not for want of means, certainly. The farmers of our country are as well able to occupy, not only good and commodious houses, but expensive houses, as any other class in community. The cottages of the English peasants are remarkable for their neatness and display of correct taste. Cannot the yeomanry of America, tilling their own soil and sleeping beneath their own roofs, do as much and far more?

But I have entered upon a broad field, and shall not attempt to roam over the whole of it. I will take, as a starting-point,

Fruit and ornamental trees and shrubbery for the farm, not pledging myself, however, to be confined to this topic, for I shall be likely to rove wherever fancy leads me.

Where do we more naturally look for fruit and ornamental trees than about the farm-house? Who can better afford them than the tiller of the soil?

Is it not a notorious fact, that professional men and mechanics do far more in this line than farmers? Those whose business it is to cultivate the soil and mature its products, should, of all men, be most practically conversant with its productions, and their grounds should exhibit a liberal display of their own handiworks.

Go into the shop of an artisan, and you will find specimens of his artistic skill. The studio of the artist is lined and decorated with the productions of his genius. Why then should not the tiller of the earth, who possesses advantages greater than they all, having the Great Architect to second his plans and crown his labors—why should not he surround his dwelling with specimens of his taste? Why not environ his home, and the home of his offspring, with that which will ever associate, in their memories, the word *Home* with all that is agreeable to the eye, the ear, and the palate?

Now this is practicable with every man who possesses a freehold even of but one acre.

I will explain, first negatively, then affirmatively.

Home was never made "*sweet home*" by allowing the pigs to be tenants at will on the whole plantation. A more unsightly, unseemly and unsavory, and, withal, thriftless practice, was never indulged in, than that of allowing swine to run lawless over one's premises. It is death to every thing verdant and comely, and life to nothing but cockroaches and fleas, and other tenants of filth.

"A place for every thing, and every thing in its place," should be every body's motto. The place for pigs is in their "quarters," which is, either the pigsty, or, at certain seasons, in a field to which they should be confined.

The pig belongs to the working class; and, if properly cared for, will do enough to pay his way. Let him have earth, peat, or muck, a fresh supply once a week, and he will make manure enough to pay his keep, and, at the same time, *keep* out of harm's way.

Not by making the grounds about the house the repository of wagons, old and new; carts, wheelbarrows, sleds, sleighs, and sledges; ploughs, harrows, and drags; wood, rails, posts and boards, and every conceivable article of husbandry or agricultural mechanism, all pitched and tumbled in every which way, so as to exemplify the idea of "confusion worse confounded."

The human mind naturally loves order. When, in the mind of a child, the idea of home is indissolubly connected with that of disorder, the remembrance is never cherished with fondness.

Not by suffering buildings to go to decay, roofs to remain in a leaky condition, windows to be in such a state as to require drafts upon the wardrobe, or permit the foxes to look out at them; fences reeling and staggering like drunken men; fruit trees dying, and falling without being replaced by young ones, and every thing indicating the sere and fallen leaf of neglect and decay. Such things chill the youthful blood and alienate the affections from home.

But home is rendered dear by making it agreeable to the eye. Let the highway, or the path leading to the house, be lined with shade trees. The cost is but the labor of setting and a little attention afterwards. What farmer could not line the roadside, an eighth of a mile each way from his house, with forest trees, and be not one cent the poorer for it? What an air of comfort it would give to the establishment! How grateful the shade to the

weary traveller in a sultry day! How oft will a blessing be invoked upon the head of the proprietor by the passing stranger! Then, viewed in the light of economy, who that might wish to purchase, would not gladly pay tenfold the cost of such trees?

I have a buttonwood standing a few yards from my house. The body of it measures twenty-five feet in circumference, and it rises full one hundred feet in height, spreading its Briarean arms over an area of as many feet in diameter. Tradition says that it was originally a stake to which horses were tied. Every farmer may have many such on or near his premises, by simply driving the *stakes*.

In no way, perhaps, can this object be attained more directly than by planting fruit trees.

Professional men, retired tradesmen, and gardeners plant fruit trees and raise fruit in variety and abundance. But how is it with the great mass of farmers? To such I would address myself more particularly. Have you an abundance of fruit, and a good variety? One cherry tree, one pear tree, and a few apple trees, don't constitute a variety, nor will they yield an abundance. Yet multitudes of farmers, "well to do in the world," can't boast even that much.

Now, my idea for a proper supply of fruit for an ordinary family, and what I know to be within the compass of every farmer, is something like the following:

1st. A good supply of currant and gooseberry bushes, different varieties, enough to furnish the family both green and ripe, give to the poor of the neighborhood, and let the birds have a plenty, to make sauce for all the worms they have eaten.

These bushes should be kept clean from grass, and be thoroughly pruned every spring. They do best when confined to one stem, tree-like.

2d. A liberal strawberry bed, covering at least from six to ten square rods. If the dwellers in cities and towns can afford to pay the gardener for growing, picking, and marketing his berries, surely the farmer can well afford to pick and eat his own. What family would be rendered less amiable or less happy by having a quart of fine ripe strawberries upon the table every day for six weeks? They are as easily raised as potatoes.

Not less than ten cherry trees, with as many varieties, will suffice. Varieties should be selected which ripen at different times, that there may be a supply during the whole season of cherries. If cherries are palatable and wholesome one week, why not have them eight? What more pitiably ludicrous, than to see a family in possession of two hundred acres of land, struggling to protect their *only* cherry tree from the birds, who innocently claim a moiety of the fruit! To one limb is attached a cow-bell; to another, a wind-mill; to another, a looking-glass; to another, a red flannel skirt; to another, a kettle of burning brimstone; while the whole tree is enveloped in an old fishing-seine, and the family are marshalled around, one with an old fowling-piece, another with a bow and arrow, another with a tin horn, and the mother with a broom, to drive away the "pesky" birds! Better far to raise enough for both men and birds. For "the birds of heaven shall vindicate their grain" and cherries too.

So of plums. Provide liberally. Don't be disheartened at the sight of the blotch, or the curculio, or both. Apply the pruning-knife, and burn the parts diseased. Shake off the *warments*, and labor to exterminate. Apply salt freely, and let the old hen, with her chicks, have free access to the rees.

Of peaches, stop not short of *twenty* or *thirty*, with varieties that will be ripening from the time of the early rareripes to that of the latest fall peach.

I am still more convinced of the correctness of the views I advanced through the *Plough, Loom, and Anvil*, some months since—that, to obtain a hardy and long-lived peach tree, we must raise it from the seed; and that the stone of a peach from a seedling is little, if any, less certain to produce its like, than is Indian corn.

When the yellow leaf appears in midsummer, and the fruit matures prematurely, grub up the tree, and commit it, with its branches and fruit, to the flames. On this subject more anon. R. B. H.

VERMONT AGRICULTURAL FAIR.

The account of this Fair is thus given by the editor of the Boston *Cultivator:*

"The horse department was, of course, the most attractive. This was not equal to that of last year at Rutland, but still comprised many excellent horses. By the regulations of the Society, they were divided into five different classes, each of which had a separate list of premiums, viz.: the descendants of the Sherman, Woodbury, and Bullock Morgans, crosses of these families, and all horses of "other blood." All entered in these different classes were driven around a half mile circle in separate parties, the judges in each class being seated for observation on an elevated stand prepared for the purpose, and the animals were afterwards minutely inspected individually.

Some of the most popular horses in the State were not exhibited, owing to the indisposition of their owners; but there were good ones in each of the classes, and the public were gratified with the sight of some noted patriarchs in the Morgan family, who, according to the nature of horses, must soon pass that bourne from which even the best *travellers* cannot return. Among these was the "Steele Morgan," for many years owned by Solomon Steele, Esq., of Stanstead, Canada East. This animal, as we were informed by Mr. Steele, was thirty years old on the twelfth of May last, and on that day trotted a measured half mile, in the presence of six witnesses, in a fraction less than two minutes. He must have been a horse of uncommon constitution; and I am told that his progeny are held in high estimation along the line in the vicinity of Derby, Stanstead, etc. Another famous old horse was the "Putnam Morgan," got by the "Woodbury Morgan." He is twenty-six years old; is owned by D. W. Cowdery and others, of Tunbridge, Vt. He has been a horse of remarkable compactness and muscular development, and the sire of valuable stock.

In the Sherman class of Morgans were some fine horses of various ages, got by Black Hawk, Comet, and others; but my engagements on a committee prevented me from such particular examinations as would otherwise have been made. My attention was specially called to a horse owned by L. North, of Champlain, N. Y. He is eight years old; was formerly known as the "Myrick Colt;" got by Black Hawk. Another horse in the same class, owned by S. C. Hall & Co., of Manchester, N. H., deserves mention in this connection. He is ten years old; stated to have been by Black Hawk, from

a mare partaking of Morgan and Messenger blood. Both these are powerful horses, and drew many encomiums from those who witnessed their action.

Among the "Woodburys," the chestnut horse of J. & R. C. Johnson, Bradford; the bay of E. Pike, of Cornish, N. H., and others whose owners' names I had no means of ascertaining, were deserving of notice.

Of the "Bulrushes," the bay horse, five years old, owned by E. Pike, of Cornish, N. H., was a very good specimen. He inherits the blood on both sides, with many of the points which denote the serviceable qualities for which that family is distinguished.

A bay horse, seven years old, owned by John Chapin, of Greenfield, Mass.—said to have been got by "Green Mountain Morgan," dam of the Sherman branch in the second generation—was a fine figure, and evidently a valuable animal.

I had not the opportunity of ascertaining the names of the owners of several fine mares.

Cattle were not largely exhibited, and of those I saw, the standard of merit could not be said to be very high. The farmers of Vermont do not seem to have studied this class of animals very much. As the rearing of cattle constitutes an important branch of husbandry with them, it is singular that it should not receive more attention. There were several bulls on the field which appeared to belong to the Short-horned breed, but in general they were coarse, hard-fleshed animals. There were a few good Herefords, among which was a bull owned by D. N. Briggs, of Richmond, and the cow "Fanny," and a yearling bull from her, owned by A. L. Bingham, of Cornwall. Of Devons, William R. Sanford, of Orwell, exhibited several fine animals, some of which were imported. Several bulls in this class were worthy of notice, but their owners are unknown to me.

In sheep, of the Merino class, the show was very good. Of the Spanish, there was a large delegation from the celebrated flocks of E. Hammond, Middlebury, which did him great credit. Good specimens were also shown by Messrs. Sanford, of Orwell; Campbell, of West Westminster, and others. Mr. Eastman, of Rupert, showed several sheep under the name of "Montarcos," which appeared to possess considerable uniformity of fleece; the staple being tolerably fine, soft, and much crimped. Of the French, the leading exhibitors were Jewett, Morse & Co., of Middlebury, and A. L. Bingham, of Cornwall. Each of these lots comprised one hundred or over. Both were in good condition, and most of them were superior specimens of this popular kind of sheep. Of the Silesian, William R. Sanford, of Orwell, and George Campbell, of West Westminster, showed beautiful specimens. Messrs. S. & C. state that every year's experience with these sheep increases the estimate of their value. A few lots of English sheep were exhibited, but those I saw were not well bred.

The show of swine did not amount to much, either as to numbers or quality, taken as a whole. I noticed a lot of very handsome Suffolks, bred and owned by Mr. Whiting, of Woodstock.

The display of fruits was much smaller than at Rutland last year, but comprised a few good specimens of apples, pears, etc.

The display of implements was smaller than that of last year; and, so far as I noticed, comprised nothing particularly novel.

There was a respectable display of manufactured and fancy articles, and some very nice things were shown in this department."

AGRICULTURE OF MONROE COUNTY, N. Y.

THIS county is said to produce more wheat than any other county in the United States. The following has been stated to be an accurate account of its production:

In 1845 it was 1,338,585 bushels; in 1850, 1,441,653. To produce the wheat crop of this county in 1845, 68,383 acres were harvested; showing an average yield of a fraction less than twenty bushels per acre. Most farmers believe that this average has been considerably increased since, and the opinion appears to be well founded.

The corn crop of 1845 was 453,463 bushels; that of 1850 was 767,021. Increase in five years, 313,558. The oat crop of 1845 was 538,063; that of 1850, 449,150. Decrease, 88,913 bushels. Potatoes, in 1845, 667,491; in 1850, 561,425. Decrease, 106,066 bushels. Barley, in 1845, 57,102; in 1850, 106,049. Increase, 48,947 bushels. These facts show that the cultivation of barley had advanced nearly 100 per cent.

Rye, in 1845, 3,198; in 1850, 8,148. Increase, 4,950 bushels.

Beans, in 1845, 4,271; in 1850, 8,215. Increase, 3,944 bushels.

Peas, in 1845, 66,341 bushels. [Number not given in the census of 1850.]

Buckwheat, in 1845, 31,149; in 1850, 26,306. Decrease, 4,843 bushels.

Hay, in 1850, 62,602 tons. [Crop of 1845 not given.]

Milch cows, in 1845, 19,590; in 1850, 14,201. Decrease, 5,381. In 1845, the butter returned was 1,504,337 pounds; of cheese, 366,782. In 1850, butter, 1,258,735; cheese, 286,653.

Sheep, in 1845, 173,952; in 1850, 112,297. Decrease, 61,655.

Horses, in 1845, 16,811; in 1850, 13,576. Decrease, 3,235.

Number of swine, in 1845, 48,493; in 1850 it was 31,201. Decrease, 17,292. Taken in connection with the fact that the corn crop had increased more than three hundred thousand bushels, this falling off of over seven thousand hogs in the county is unaccountable.

Number of neat cattle, not cows, in 1845, 19,715; in 1850, the number was 18,168. Decrease, 1,547.

Value of farm implements and agricultural machinery, in 1850, $782,833. This is a larger sum than any other county in the State returned at the last census.

Pounds of wool, in 1845, 402,926; in 1850, 365,084. Decrease, 37,842. It is worthy of notice, that while the number of sheep has decreased 61,655, the decrease in wool bears no comparison to that in sheep.

THE APPLICATION OF PERUVIAN GUANO TO COTTON.

THE following article was contributed by Mr. J. M. Dantzler, of St. Matthew's Parish, to the *Southern Agriculturist.* It is upon a subject of great interest to Southern planters, who have generally supposed that guano was not adapted to the condition of their soils. This statement throws light on that point. The experience of others ought also to be published. We invite our numerous Southern readers to give us more information upon it.

MESSRS. EDITORS: For the benefit of my brother planters, you will allow me a short space in your valuable journal, to give the result of my experiment

with Peruvian guano as applicable to cotton. I will confine myself simply to a statement of facts.

In the spring of '52, I procured a little over a ton of guano, and applied two hundred and fifteen pounds to the acre. Not unfrequently plaster of Paris is mixed with it in the proportion of one eighth or one fourth ; but in order to test accurately the additional product of the land, unaided by any thing else, I mixed only with sand. This was done also to render its application more uniform.

The land upon which this experiment was made, was originally what might be termed lively, sandy, long-leaf pine land—the clay about eighteen inches from the surface—adjoining rich, rolling oak and hickory land. The field was cleared thirty-five years ago, and was completely exhausted by continued cultivation. It, however, had four years' rest previous to the experiment, and had produced a scanty crop of poor grass. This was burnt off in January, and the land broken up with a shovel-plough immediately afterwards.

Late in April, the rows were drawn off with a shovel-plough, pretty deep, and in these furrows the mixture of sand and guano was strewn, leaving out an acre about the centre to be planted without guano, which I and my manager, who is a man of excellent judgment, thought to be of the same quality as the rest. Beds were thrown up by passing on either side with the same plough, and the cotton was planted in chops about twelve inches apart.

The effect of the guano was manifest by the time the cotton was a week old, and was most marked during the whole season ; and the yield was astonishing. The acre without guano, and an average acre of the guanoed, were gathered carefully in good weather, and weighed when picked out, and the former produced 135 pounds of seed-cotton, whilst the latter produced 581 pounds. All will admit that the land was poor enough for an experiment of this sort. It will be ascertained that the guanoed acre produced 446 pounds more than the unguanoed acre ; and if three pounds of seed will make one of clear cotton, you will have 148 pounds of clear cotton, which, if valued at 8 cents per pound, is worth $11 84. The additional cotton seed I value at $1 as manure, making the total product of the guano $12 84. Deduct from this the cost of the guano applied to the acre, which was $6, and it will give $6 84 as the net gain. This is over a hundred per cent. on the amount expended in guano.

Nor is this all: It has certainly left the land in an improved condition, if present appearances are not deceptive. It is now at rest, and the growth of vegetation on it, up to this time, is as marked this year as that of the cotton was last. This is no small item in estimating its value ; and I go so far as to affirm that it would be economy to use it, if the overplus of cotton only remunerated you for the cost of the guano. The improvement to the land, and the labor saved in the cultivation of less land to the hand, in order to produce a given crop of cotton—added to the advantages derived from resting the land, which would otherwise be planted—will far more than repay for the trouble of putting down the guano.

I have five tons this year, which I will apply in the same manner, and hope to be enabled to give you as favorable an account of it.

I have been thus particular, Messrs. Editors, in order to give sufficient data to all to draw their own conclusions.

J. M. DANTZLER.

St. Matthew's Parish, La.

COTTON-GROWING: AN EXPERIMENT.

The following experiment is published, first, for its own worth, and, secondly, for the sake of the example. We invite, and not only invite, but would urge our friends at the South to multiply statements of this sort. This is found in the *Southern Cultivator.*

"Some time during the month of February, in the spring of 1848, I had a small piece of ground (4 acres) broken up with a turning-plough in the ordinary way, covering up corn-stalks, pea-vines, and other litter pretty effectually. The quality of the land was tolerably good, capable of producing from 800 to 1,000 pounds of cotton per acre, of a seasonable year. On the first of April, I had it bedded up thoroughly, rows 5 feet apart, and planted on the 5th, having previously rolled the seed in ashes. As soon as the third and fourth leaves made their appearance generally through the field, I had it 'barred off' with the same turning-plough, running the bar next to the cotton, two of my best and most experienced hoe-hands following and chopping it in bunches, as near the distance of 18 inches as they could conveniently. It remained in this situation for eight or ten days, when I again had it "sided" with sweeps, running pretty close to the cotton and throwing a little dirt among it. The sweeps were followed by the hoes, this time chopping out *every other bunch*, making it *three feet* in the drill, and thinning out the remaining bunches to two or three stalks. I then had the middles deeply and well broken out with shovel-ploughs, running from six to seven furrows in a row. In a few days after, it was put to a stand—one stalk in a place. The after cultivation was with sweeps, hoes generally following to cut any stray weeds or grass that had sprung up among the cotton. The only difference in the management of this cotton from that usually pursued by planters, was the distance it stood apart in row and drill. Taking into consideration the quality of the land, it looked like I would hardly be able to make more than half a crop; and I assure you I felt somewhat crest-fallen in looking over my 'patch' after it had been put to a stand—it looked so 'few and between.' The season turned out to be a very favorable one for the crops generally in our immediate section of country, and fine cotton crops were made.

Now for result of this, my first experiment. The *first* picking, I gathered 1,348 lbs.; *second* picking, 2,236 lbs.; *third* and last picking, 2,044 lbs.; making in all 5,628 lbs., or 1,407 lbs. per acre. In the growth of this cotton I noticed one or two things worthy of note; the first was, it branched much nearer the ground, and the limbs were much larger than on cotton planted in the usual way; some of them being as large as the parent stem, and when straightened up were equally as tall. The next thing that attracted my attention was the increased size of the boll. It was fully a third larger than on my other cotton planted in an adjoining field; and lastly, though not of minor importance, it all opened and was gathered by the 10th of December. I attributed its early maturity to the free access of the sun and the free circulation of air, as the limbs barely interlocked between the rows. The yield of my other cotton—planted 4 feet by 15 to 20 inches in drill—was 1,038 lbs per acre.

I have another 'patch' of eight acres the present season, planted in the same way as the other, that is, 5 feet rows, and 3 feet in drill; and if it will be of any interest to the readers of the *Cultivator* to know how it turns out, I will give it to them this winter or early in the spring, provided you will give me access to a small corner of the *Cultivator.*

Yours, respectfully, A Small Planter."

FOR THE PLOUGH, THE LOOM, AND THE ANVIL.

SAVING OF MANURES.

MESSRS. EDITORS:—We have alluded, in a former number, to the waste of manure in cities. In that article, our remarks were principally confined to a single item. There are many other sources of this waste, more than we can well particularize, which the health of the population and the fertility of the country require should be remedied. We say, the health of the people. The denizen of the city, who scarcely ever enjoys one of the greatest blessings, the pure, fresh air of the country, is little aware of the nuisance he inhales into his stomach and lungs at every breath, especially in the warm season, when decomposition and evaporation are in vigorous action on a thousand subjects. But let one unaccustomed to the pent-up air and decaying nuisances of the town, be transferred from the pure breezes of the country to such an atmosphere, and the effect upon the system soon manifests itself, and too often results in disease. In view of these facts, he ceases to wonder at the excessive mortality of the city, especially among infants and children. The air is unnatural and unhealthy; and instead of wondering that so many die, he may well wonder that any live.

Now, the miasmatic influence of this atmosphere may in a great measure be remedied, and the cause of it turned to valuable account, inasmuch as it arises from the putridity of matter passing off by decay, which, if it were carefully removed to the country, before this decay commenced, would become valuable, by giving fertility to the earth and plenty to its inhabitants.

What immense amounts of manures are constantly poisoning the air by the putridity that arises from privies, drains, where every thing is thrown in confused masses, sewers, the grand receptacles of drains, perishable substances thrown into the streets, including the waste and refuse of places of business! All this, if carried into the country, would not only lose its miasmatic influence, by being mixed with the soil, but would increase its products in a wonderful ratio, which would go back to the city in the shape of healthful and comfortable commodities, and furnished at a cheaper rate, for plenty always produces a reduction of prices. So, two great benefits would result to the city from the operation. First, the atmosphere would be improved by the removal, and this purifying would give an increase of health, and the productions it would increase would be afforded at a cheaper rate, which would throw them more plenteously within the reach of all classes. This, too, would promote the general health.

It has often been a matter of surprise to us, that boats fitted for the purpose have not been provided to remove these annoying substances from all cities and towns located on navigable waters. If this were done, an immense saving to the country as well as health to the city would be the result; for the boat-load, when once freighted, might without difficulty be transported any distance, at least as far as farmers eager for manures would permit them to pass, and bring remunerative prices. And the corporations might, when their carts were loaded, as easily deposit them on board of a boat as into a slip, where they would be for ever lost to all useful purposes. What would be better, a competition would be created in the business, so that eventually such cities and towns, instead of being taxed as they now are for the removal of these nuisances, might derive an income from this very

source. This would create new inducements to thoroughness in the work, and every thing which could be applied to benefit the land would be saved, carefully saved, to be applied to that purpose.

If such a state of things should be introduced—and it eventually must be, in the very nature of progress—what an incalculable benefit would result to the country from the operation! Broad fields, now barren through want of strength to sustain a crop, would smile in all the beauty and wealth of abundant harvests. The city would be purified and the country beautified, and both enriched by the operation. Is not the object one worthy of the united efforts of city and country to effect?

Yours truly, W. B.

Richmond, Mass., Oct. 11, 1853.

FALL PLOUGHING—WHY BENEFICIAL.

We have repeatedly referred to this subject, and have shown how this practice operates beneficially upon the soil. There is still another view to be taken of it, worthy of *practical* consideration. It is perhaps true, in general, that when fields are ploughed in the fall, a *larger amount* of vegetable matter is buried in the soil, than when the operation is deferred to the spring. The browsing of cattle, and perhaps a more thorough consumption by swine, roaming freely over its surface, added to the effect of wind and storms, and the natural changes which take place, when left on the surface, essentially diminish the quantity and quality of the stalk and stubble, left originally by the reaper. This difference, in particular cases, may be of no little practical importance.

But there is another and more important difference. Green crops decay much more rapidly than dry stubble. If therefore green vegetable matter be ploughed in in the fall, the early spring growth receives a far greater benefit from it than if the same matter had been left upon the surface, there to become dry and more capable of resisting the appliances which should hasten its decomposition. Every farmer's boy knows the comparative readiness with which green hay, when in a confined state, takes on fermentation, while that which is well cured endures almost any treatment and still remains unchanged. Were the object only to restore the elements of fertility to the soil, without reference to the speed of its action, as already suggested, the argument would still be in favor of ploughing it in when green. But when its fertilizing properties are needed by the young shoots of the early spring, the importance of this point must be readily appreciated. For it should be ever kept in mind that health and vigor is of the utmost importance in the earliest stages of vegetable growth. Without a vigorous root and stem, there never can be a vigorous plant; and though the case is not utterly hopeless, when, in its first efforts, the young shoot is obliged to encounter even a severe struggle, it is far better to avoid this danger of its destruction. In general, the character of its early growth determines the character of its entire growth.

Probably every farmer knows that if, for a portion of the year, a sheep be but half fed, the growth of his wool for that period will be materially affected. The fibre will be more slim and weaker; and, as in the case of a rope, no greater strain can be put upon it than its weakest part can endure, so it will be as to the power of this fibre of wool. The vigor of any vegetable tissue

is affected in a similar manner, not always, perhaps, beyond partial redress, but always to the injury of the plant.

Whatever then tends to a healthy and vigorous growth, when the seed first puts forth, performs a most important service. Green crops, when ploughed under, do perform this service in a much more speedy manner than dry stubble, and hence, the careful farmer will endeavor to avail himself of all the benefits he can thus secure to his land.

It is in accordance with this fact that in those districts where the art of agriculture is carried on in the most thorough manner, green crops are often raised for the very purpose of being ploughed under. Clover, buck-wheat, turnips, and various other crops are sown with this single design. Sometimes, two or three such crops are thus buried in the soil in a single season. It is on this principle, in connection with another which regards exact similarity in the character of the elements furnished and those demanded by the young plant, that a manure of the prunings of the grape vine is more efficient for grapes than almost any other application. In dry, loose, sandy soils, we doubt whether fall ploughing, of itself, is to be commended: all our philosophy is against it, and in practice we know of nothing which teaches a different lesson. But even on such soils, if the farmer will turn up the subsoil, which is often clay, and mingle that with the lighter sand upon the surface, fall ploughing will prove to be of great value. The frosts and storms of winter will promote a more thorough mingling of the elements now brought into contact, and the labor necessary in the spring to prepare it for seed will be comparatively light.

Our experienced and judicious neighbor, Mr. A. B. Allen, recommends that guano be spread broadcast in the fall of the year, at the rate of 100 to 300 lbs. per acre, and ploughed in from three to twelve inches deep, and then to replough in the spring. By this process, the guano effects a double purpose: it becomes well mingled with the soil, ere the seed requires nutriment, and without the danger of causticity, &c.; it also tends to promote the decomposition of the sod and other vegetable matter in the soil.

COLLECT THE LEAVES.

We have advised our readers on the subject of gathering leaves, and would now repeat the same counsel. One who lives in the neighborhood of a deciduous forest, that is, one which sheds its leaves annually, can secure a rich treasure, with very little pains. Those who have only a small garden to take care of, may supply a sufficient quantity of good manure from this one source. If annually collected, their beneficial effects will be felt every year. We have elsewhere spoken of the profit of ploughing in green vegetables; and though the action of dry leaves is much more slow, it is not the less sure. The whole benefit of the application will not be secured in the first year of their application, but by an annual supply a constant effect will be produced. If they can be collected and made into a compost, so much the better. But if not, if ploughed in during the fall, or covered by the spade annually, they will prove quite effective. Leaves are also useful in improving the physical condition of either hard or wet soils. They cause the earth to lie more loosely, and promote thorough evaporation.

NATURAL VEGETATION AND GEOLOGICAL STRUCTURE

A GUIDE TO THE QUALITY OF THE SOIL, AND THE AGRICULTURAL CAPABILITIES OF LAND.

We are glad to follow up our own remarks on this subject by a matured and carefully considered essay which has appeared in the *Farmer's Magazine*, (England,) and which has just now fallen under our notice.

We are confident that these *scientific methods* of discovering the qualities of soil are not only too much neglected, but their actual value is much underrated. We commend this subject to general attention, and shall follow up the discussion as opportunity and convenience may permit.

"Enough is known respecting the relations subsisting between the natural vegetation and the composition of the soil, to render it certain that it may be made a useful auxiliary in judging of the quality of land. In order, however, to secure the full value derivable from this source, more accurate and extended observations are required than those which we possess at present; and to confer general benefit, it is necessary that those who describe plants as characteristic of certain soils, should all speak the same language.

The necessity for some general botanic nomenclature among agriculturists is strikingly exemplified by one of the papers on the characteristics of fertility and barrenness, in the *Journal of the Royal Agricultural Society*—that by Mr. Askell—in which some really good observations are deprived of their value, by being rendered unintelligible to those readers who are ignorant of the plants which are described under their local names of woodwax, moons, five-leaves, hard-heads, and carnation-grass. Mr. Bravender in his prize essay gives the botanical, as well as the local, names of the plants to which he refers. He says, that after he had resolved to follow out a series of observations on the quality of the vegetation on all the lands which he should have occasion to visit, he found that he could make no progress till he had applied himself to the study of geology and botany. He admits that time and labor are necessary to acquire a sufficient knowledge of these sciences—a difficulty which we think he rather overrates—to be used as tests of the quality of land; but he observes that this only shows the absurdity of calling in the assistance of persons who have never spent five minutes of their lives in the practical study of either.

We agree with him that the natural vegetation is more to be relied on, as a guide to the quality of the soil, upon pasture than upon arable land. Upon the former, he considers it the most certain guide of all; and he proposes to render it more definite by adding a description of the prevalent grasses and other plants of which the herbage is composed to such notes as the following, which are usually made by valuers: 'Herbage of bad quality;' 'Herbage short, but thick at the bottom;' 'Herbage coarse, sour, and peaty.' There are some species which occupy the ground, to the almost total exclusion of others, upon barren soils, and which disappear before manuring, draining, and other improvements, giving place to those which are the prevailing plants in pastures of great natural fertility. There is another test, however, which he proposes to apply, besides that of the species of which the sward is composed, and that is the number of plants growing upon a square foot. Of the species of grasses indigenous to Britain, about 150 in number, there are about twenty which appear to be the best, and which are nearly all present

in fertile meadows, in greater or less proportion. None of these are so productive, when cultivated alone, as when associated with others. There are other inferior grasses, the presence of which in small proportions is by no means disadvantageous, as they fill up vacancies between the stems of the better sorts, or come to perfection at a different season. With regard to the number of plants present in a given area of sward, it has been observed that on the best natural meadows it amounts to 1100 on a square foot, which in water meadows is increased to 1800; while a square foot of arable land laid down with seeds contains no more than 80. An old pasture may be considered poor, says Mr. Bravender, which does not produce as much fodder as a piece of seeds of the second year. On arable land the natural vegetation is of less value as a criterion of the quality of the soil, because such land produces, or ought to produce, nothing but what the farmer has placed there. Recourse must therefore be had to the natural vegetation of the borders of the fields, or of adjoining uncultivated land—to the free or stunted growth of the white-thorn and other fence plants, and of the hedge-row timber. Timber trees, however, indicate, in our opinion, rather the nature of the subsoil and sub-strata, than of the soil, and are only useful guides, so far as these influence the quality of the land. But though the natural vegetation is taken for a guide with less confidence on arable than on pasture land, the stunted or luxuriant growth of many of the common weeds of the farm, which grow indifferently on good and bad soils, furnish reliable indications of the condition of the land dependent on cultivation, as also of its intrinsic quality. There are a few with which, when they appear in vast quantities, the cultivated crops struggle with difficulty on even well-managed land. Such plants are signs of the deficiency or excess in the soil of certain constituents, as sure as can be derived from chemical analysis, and perhaps more so, in consequence of the difficulty of selecting a sample of soil for analysis which shall represent the average of an entire field.

When land, for instance, on the sands and sandy loams of Norfolk, is much given to *Chrysanthemum segetum*, or corn marigold, it is held to be an infallible sign that it requires chalking, called there claying and marling; while an abundance of red poppy, *Papaver rhœas*, is an indication equally certain that it has been over-chalked. There are others again, as *Potentilla anserina* and Leopard's Bane, (*Doronicum pardialianthes*,) which indicate an excess of deleterious salts of iron in poor wet clays. The family of rushes, (*juncus*,) with colt's-foot (*Tussilago farfara*) and *marestails* and *horsetails*, (*Hippuris vulgaris* and *Equisetum arvense*,) are universally held to indicate an excess of moisture and the presence of springs. There are many other plants, from the presence, or rather prevalence of which, observation, aided by analysis of their ashes, might draw much valuable information respecting the defects of the soil, and the substances required to correct them.

In judging of the agricultural capabilities of land in an old country, the indications afforded by the natural vegetation and geological structure ought to go hand in hand. In a new country they are companions which cannot be divided. If either is to be adopted alone, it should be geological structure; because its indications are the same in all parts of the world, whereas the character of the vegetation varies with the climate, and till the settler has acquired experience of the sort of land indicated by the presence of the different members of the new flora, he is often extremely puzzled as to the soils of which the strange plants are characteristic, which meet him at every turn. Some interesting facts, bearing on the relations between the natural vegeta-

tion and the quality of the soil, are scattered through Professor Johnston's Notes on North America. The undulating upper portion of the valley of the Hudson contains much strong yellow clay, part of a wide-spread, erratic, tertiary deposit, which borders Lake Champlain, where it is 100 feet thick, and extends thence north and east, along the banks of the St. Lawrence. It consists, in the under part, of a stiff clay, resting upon rocks with polished and grooved surfaces, which geologists now very generally refer to the former action of ice, in part terrestrial, in part marine. Above this is a light-colored clay, containing shells of existing species, and over all a bed of yellow sand, sometimes loamy and fertile, but often barren and covered with stunted pines. The soils vary, as this upper sand remains at the surface, or has been removed by natural causes. The stiff clay produces in its unreclaimed state a native growth of hard-wood trees; but when cleared and under crop, it is apt to crack and harden in dry weather. The sandy loams which rest on the clays form broad pine barrens, in which the white pine prevails; while the sands and more sandy loams are covered with the yellow pine. Contrary to what might have been anticipated, it is found that when brought into cultivation, the loamy sands suffer less from the effects of heat than the stiff clays; but that the apparently purer sands bear the drought better than either. This is attributed by Professor Johnston to their greater porosity, and consequent superior capability of absorbing moisture from the air. To this absorption from the air he also ascribes the known fact that stiff clays which have been drained are really moister in summer than the same description of land undrained. This is one, but not the only reason. Undrained clays are like a turnpike-road, mud on the surface in wet weather, but at a certain depth impervious to rain, which runs off them, carrying the manure away with it into the ditches and brooks. Into drained clays, on the contrary, rendered porous by the process, the rain penetrates, with all its fertilizing accompaniments, to the depth of three or four feet. When saturated with moisture, it discharges the superfluity into the drains, as from a dripping sponge; and in summer it becomes, as it were, a damp sponge, retaining moisture by capillary attraction.

The butternut, *Juglans cinerea*, so valuable for its oily nut, delights in a calcareous soil, and is held to be indicative of a good wheat soil, wherever it occurs in abundance and luxuriant growth. It is not known in the woods of Nova-Scotia, and is only found in New-Brunswick in particular places. It has there given the name of Butternut Ridge to a thriving settlement on a ridge sloping gently to the west, and composed of thick-bedded hard blue limestone, which in many spots comes to the surface, and over a large extent of the slope is covered only by a thin soil. Here in its state of wilderness the butternut flourished, and attracted the early settlers as a sign of fertility.

These may be considered rules: let us now look at the exceptions. The presence of hard wood, as the broad-leaved timber trees are called, is deemed in North America a sign that the soil is sufficiently argillaceous to constitute good wheat land. This test, however, fails in the case of a second growth, which springs up after one of those fires which devastate extensive tracts of the forest. Under such circumstances, an interchange of vegetation takes place between the soils. Hard wood, consisting chiefly of poplar and birch, with a sprinkling of maple, takes the place of the pines, which then grow almost alone on the ridges formerly occupied by hard wood. This rotation in nature's cropping is always attended to by those who explore the woods for the purpose of ascertaining the agricultural capabilities of different portions of them; and they are able easily to discover the difference between

a first and second growth by means of a few large trees, which show that some considerable time must have elapsed since a general destruction of the forest. Changes in the vegetation on the same soil are not confined to the timber trees. *Epilobium coloratum* and *Enchitites hieracifolium* have acquired the names of fire-weeds, from their rising abundantly upon cleared land, which has been neglected in the spring, after the timber tree has been burned. When the land, however, is ploughed, they disappear, and are replaced by the Canada thistle and hemp nettle, which become troublesome weeds. The Canada thistle is not indigenous, but is the *Enicus arvensis*, or thistle with a creeping root, which is the pest of the slovenly farmers of the Old World—a pest which they do not believe to be propagated by seeds, but bred by their land in common with many other weeds. To the same class of farmers, it forms an equally troublesome pest in the New World, where it has found a congenial home and a congenial state of husbandry, spreading with such rapidity, and taking such tenacious hold of the soil, wherever it establishes itself, as to have acquired the name of the 'accursed thistle.' The artillery of legislation has been brought to bear on it, in the form of an 'Act to prevent the growth of thistle,' which was passed by the Legislature of New-Brunswick with no better success than usually attends interference with such matters by Acts of Parliament. The thistle has spread, apparently in defiance of the Act, and has given increased annoyance even in the county of Gloucester, for whose special benefit the enactment was designed. Nothing, in fact, can arrest its growth, but the general spread of clean farming. Individual exertions can do but little. Of what avail is it that one man extirpates his own thistles, if liable to the invasion of a host of winged immigrants from his neighbors? It is a curious fact that in North America the European weeds are generally superseding those which are indigenous to the soil, particularly along the Atlantic coasts and the river borders. The common plantain (*Plantago major*) is called by the natives the white man's foot, whose steps it follows; and even the plants growing by the road-side are, according to Agassiz, all exotics; every where on the track of the white man, the native weeds disappearing before him like the Indian.

The *Lithospermum arvense*, corn-gromwell or stone-weed, is a European importation, brought in probably with some foul seed-wheat, from France, Germany, or England, which has spread with a rapidity equal to that of the 'accursed thistle.' In districts where it was unknown 30 years ago, it has now become nearly lord of the soil. Its seeds are purchased at the oil-mills of Yates county at the rate of hundreds of bushels, and would be bought at the rate of thousands, if the price were 8*s.* a bushel instead of 1*s.* 6*d.* The purpose to which it is applied is the adulteration of oil-cake for the benefit of unwary purchasers in England. The rapidity with which this weed spreads, arises out of several causes—the hardness of the seed, enabling it to pass uninjured through the stomach of an ox and even the gizzard of a bird; and the fact of its growing but slowly in the spring and pushing up rapidly in the autumn, so as to receive little check from spring ploughing, while its roots, which spread only on its surface, exhaust the nourishment which should be supplied to the wheat: these natural qualifications for rapid colonization are aided by the prevalent rude system of farming, which, raising wheat year after year on the same land without attempting to clean it, allows the pigeon-weed, as it is called in America, to grow and ripen with the wheat, and to seed the ground more thickly with every crop."

INTRODUCTION OF DOMESTIC ANIMALS INTO AMERICA.

THE following account of the introduction of domestic animals into this country has been condensed from the late Census Report, and will be found to possess much interest:

"The first animals brought to America from Europe, were imported by Columbus in his second voyage, in 1493. He left Spain as admiral of seventeen ships, bringing a collection of European trees, plants, and seeds of various kinds, a number of horses, a bull, and several cows.

The first horses brought into any part of the territory at present embraced in the United States were landed in Florida by Cabeca de Vaca, in 1527, forty-two in number, all of which perished or were otherwise killed. The next importation was also brought to Florida by De Soto, in 1539, which consisted of a large number of horses and swine, among which were thirteen sows, the progeny of the latter soon increasing to several hundred.

The Portuguese took cattle and swine to Newfoundland and Nova Scotia, in the year 1553. Thirty years after, they had multiplied so abundantly that Sir Richard Gilbert attempted to land there to obtain supplies of cattle and hogs for his crew, but was wrecked.

Swine and other domestic animals were brought over to Arcadia by M. L'Escarbot, a French lawyer, in 1604, the year that country was settled. In 1608, the French extended their settlement into Canada, and soon after introduced various animals.

In 1609, three ships from England landed at Jamestown, in Virginia, with many immigrants, and the following domestic animals, namely: six mares, one horse, six hundred swine, five hundred domestic fowls, with a few sheep and goats. Other animals had been previously introduced there. In 1611, Sir Thomas Gates brought over to the same settlement one hundred cows, besides other cattle. In 1610, an edict was issued in Virginia, prohibiting the killing of domestic animals of any kind, on penalty of death to the accessary, and twenty-four hours' whipping to the concealer. As early as the year 1617, the swine had multiplied so rapidly in the colony that people were obliged to palisade Jamestown to prevent being overrun with them. In 1627, the Indians near the settlement fed upon hogs, which had become wild, instead of game. Every family in Virginia at that time which had not an abundance of tame hogs and poultry, was considered very poor. In 1648, some of the settlers had a good stock of bees. In 1667, sheep and mares were forbidden to be exported from the province. By the year 1722, or before, sheep had somewhat multiplied, and yielded good fleeces.

The first animals introduced into Massachusetts were by Edward Winslow, in 1624, consisting of three heifers and a bull. In 1629, twelve cows were sent to Cape Ann. In 1629, one hundred and fifteen cattle were imported into the plantations on Massachusetts Bay, besides some horses and mares, several conies, and forty-one goats. They were mostly ordered by Francis Higginson, formerly of Leicestershire, whence several of the animals were brought.

The first importation into New-York was made from Holland, by the West India Company, in 1625, consisting of horses and cattle for breeding, besides as many sheep and hogs as was thought expedient."

CHEMICAL ANALYSIS.

Our readers will remember our remarks on this subject in the October number. We have since met with the following in the Baltimore *Sun*, and as it speaks *understandingly*, we give it place here. The difficulty of getting a true sample of the soil may be partially avoided by the course there recommended, that is, by selecting considerable quantities, "a quart or two," and from different localities. The chemist can then mingle thoroughly and use what he pleases.

We would not write too strongly against the importance of this application of science to agriculture under certain circumstances. The results have been of very great importance, and yet, as a general thing, we would rather withhold the chemist's fee and apply it on the manure-heap. If both were in our power, we would have recourse both to the chemist and to the making or purchase of manure. A writer in the *Sun* says:

"Within a few years, an expectation has prevailed that, by means of chemical analysis, the exact composition of soils could be ascertained, and thence we should learn what special application each soil might need to make it fertile. It is obvious that if this result were attainable, agriculture would become of the nature of an exact science; and, as might be expected, the general interest and great importance of these researches have attracted the public attention to them. The agricultural journals give notices of chemists who analyze soils for farmers, and give advice, founded on the analysis, for the application of manures. On the other hand, we have seen published the opinions of men of science, to the effect that such analysis, in the present state of chemistry, does not lead to useful results. In the address of Professor Hallowell, of Alexandria, to the Agricultural Society of Loudoun, Virginia, recently published, he expresses the opinion that the analysis of the soil is 'wholly useless for practical purposes.' His remarks on the subject are as follows:

'I have been requested to state my opinion of the advantage of analyzing soils, with the view of determining what manures to apply for their improvement, and I do so with pleasure, having had some experience in the practical part of the subject. The present state of chemical science is such as to enable the chemist to determine, with the *utmost precision*, the constituents of a body subjected to his examination; but a difficulty lies in getting a fair specimen of the soil to operate upon. The quantity usually taken to analyze is from fifty to one hundred grains, say half a teaspoonful; and how is so small a quantity to be obtained that shall be an exact sample of the field? If it should not be an *exact sample*—and it appears almost impossible it ever should be—then the result will necessarily mislead, and is wholly useless for practical purposes. On this account I place comparatively little reliance upon any benefits likely to arise from a general analysis of soils, though such an analysis may sometimes be very beneficial in determining the presence of some hurtful ingredient that may be diffused through the soil, and which may be neutralized by some substance readily determined and applied. I would rely much more on a knowledge of the *constituents of the associated rocks* from which the soil has resulted, and the mode of cropping and culture to which the lands have been subjected; and thus knowing what they originally contained, and what has been removed from them, we can readily infer what is left. If the money paid for analyzing a soil, as a general thing, were

spent in the purchase of some guano, crushed bones, ashes, or lime, with which to experiment on different crops, *on a small scale*, it would be likely to lead to much more satisfactory and profitable results.'

To the same effect, as to the practical value of such analysis of soils, is the opinion of Boussingault in his Rural Economy:

'The qualities which we esteem in a workable soil depend almost exclusively on the mechanical mixture of its elements. We are much less interested in its chemical composition than in this; so that simple washing, which shows the relations between the sand and the clay, tells, of itself, much more that is important to us than an elaborate chemical analysis.'

But the most elaborate examination of this important question which we have seen is by an eminent chemist of our own country, Professor Booth, of Philadelphia. The distinguished reputation of this gentleman for learning and skill in every department of scientific and practical chemistry, gives great weight to his opinion. In a paper read before the Philadelphia Society for the promotion of Agriculture, he says:

'Having followed the path pursued by many chemists in Europe and America in analyzing soils, with a view to their bearing on the improvement of agriculture, I have become more and more convinced that chemistry has not yet advanced to such perfection that those analyses can have any immediate practical value.'

After giving his reasons at length for this opinion, the Professor says:

'But although soil analyses may not be useful at present to the operative farmer, they may be made available for the advance of scientific agriculture; and for this purpose the enlightened agriculturist should lend his aid by having analyses of soils most accurately performed; not one or two, but numerous analyses of the same soil under varying conditions. Such investigations, keeping pace with the advance of vegetable physiology, will the sooner tend to deliver husbandry from the thraldom of empiricism, and place it under the dominion of a rational system. Besides the analyses of soils thus performed, the analyses of ashes of plants and of manures, by throwing light on vegetable physiology, will contribute to the progress of rational agriculture. Above all other things, frequent and carefully-conducted experiments on manures of known composition, and close and continued observation of their effects on various crops, will accumulate a treasure of experience from which sound theory will draw her data, and which will then reäct most beneficially upon the culture of plants. Then may we look for a literal fulfilment of the expression that 'the desert shall blossom as the rose.'"

DEMAND FOR SEEDS.

At a meeting of the Farmers' Club at Bloomsdale, recently held, statements were made in reference to the immense demand for seeds. The meeting was at the house of David Landreth, Esq.; and the progress of this trade is vividly illustrated by the history of this gentleman and his establishment.

The father of the present Mr. L., who was the first in this country to systematically cultivate seeds for sale, commenced his operations shortly after the Revolution, on a very limited scale, but at that day sufficiently large to meet the demand, with the aid of occasional importations from Europe; and within the last quarter of a century, the grounds cultivated by this concern (then, as now, the largest in the Union) did not exceed 30 acres. Now the shipment of seeds is to far-distant points. California calls for supplies by

almost every ship; Oregon and New-Mexico make occasional demands; South America and the West Indies are regular customers; and the British possessions in Asia obtain annual supplies. Within a short period prior to our late visit, Mr. L. had completed a shipment of *four tons*, ordered for distribution in British India! Thus has increased the commercial demand for one of our country's many products, and thus is answered a question which is very naturally asked on viewing the crops at Bloomsdale,—Where is market found for all these seeds? The amount of labor expended on the culture is evidently great; and though nearly all the crops are in drills, thus admitting of mechanical aid, still many hands are requisite to subdue the weeds, harvest and thresh the crops, and perform other operations incident to the business.

Eleven families now reside on the estate, (the single men boarding with the married,) each provided with a neat cottage and garden—keep their own pigs and cultivate their own vegetables and flowers. They are encouraged to keep all neat and trim; the inconvenience and temptations of remote residence are avoided, and as Mr. L. never changes his hands but on compulsion, they feel assured good conduct will insure permanent homes.

Since our last visit, a tank for collecting liquid manure flowing from the barn-yard has been erected; it is capable of holding about 50 hogsheads, durably built of stone, coated with hydraulic cement, and is emptied by an ordinary chain-pump, which discharges into a cask on wheels. This, though an economy almost universal among English farmers, is seldom resorted to in this country, though it could be with decided advantage by every tiller of the soil.

Among the additions to the live stock, we noticed a pair of Norman ponies, which are made to serve a double purpose—amuse the youngsters and cultivate drilled crops; they work within 16 inches, and possess sufficient power for the harrow. These, with mules for similar labor, and oxen and heavy horses for ploughing and cartage of manure, are the force employed.

The lawn at Bloomsdale embraces eight to ten acres, and though formed but five years, promises to be highly attractive, it being laid out with unusual care and judgment. It is planted with a carefully selected variety of indigenous trees, also many rare specimens imported from abroad for the position they now occupy.

We might express regret, that many among us who have expended largely in the erection of their mansions, have not decorated their grounds to accord therewith. True taste consists in an harmonious whole; the grounds and buildings, to be pleasing and effective, must be "in keeping." Even the *habit* of trees should be studied: certain trees suit certain styles of architecture. Flat-headed ones do not accord with pointed buildings, nor do spiral trees harmonize with Italian structures, the lines of which are mainly horizontal. On these subjects we have much to learn; let us meanwhile practise what we already know, and thus impart the information to others. This report further says:

"The multifarious character of the crops under cultivation renders it impracticable to particularize, and keep our report within suitable bounds. Among the more prominent ones we noticed *fifty acres in peas*, which, at the time of our visit, were assuming the hue of approaching maturity. The harvest of this crop is made with dispatch, and the same land immediately laid down in beans, which in turn are harvested in October. The process of culture at Bloomsdale may thus be seen; and though the land appropriated to *garden seeds* is nominally two hundred acres, yet the practical effect is to plough within the year at least three hundred!"

RAILROAD OPERATIONS.

CHICAGO, ST. CHARLES, AND MISSISSIPPI AIR LINE RAILWAY.—This road is all under contract, and twenty miles of it west of Chicago it is expected will be completed and ready for running on the 1st of January, 1854. The location of this line preserves nearly the forty-second parallel through Illinois to Savannah on the Mississippi river, where it connects with the Iowa Central Air Line to the Missouri river. These companies are pointing to the South Pass, hoping and expecting to become the trunk line to the Pacific. The latter company is fully organized, and under good headway.

THE WISCONSIN NORTH-WESTERN RAILROAD COMPANY is preparing for the early construction of a road from Madison to the Minnesota line.

THE MADISON AND LA CROSSE road bears the stamp of progress. This road will reach the Minnesota line near the south-eastern boundary.

THE MILWAUKIE AND PRAIRIE DU CHIEN RAILROAD is progressing rapidly, and will reach the Mississippi but a short distance below the Territorial line.

INDIANA CENTRAL RAILWAY.—The cars upon this road, as we learn from the Richmond, Ind., *Palladium*, are now making their regular trips from Dayton to Indianapolis. The amount of travel upon it, so far, has exceeded the expectations of its most sanguine friends. The cars have been crowded every day. It is the most direct route from Indianapolis to Cincinnati, and passengers are availing themselves of its facilities.

ROCK ISLAND RAILROAD BRIDGE.—The contract for the stone work of the bridge across the Mississippi river at Rock Island was taken by Messrs. John Warner & Co., contractors on the Rock Island Railroad, and for the superstructure by Messrs. Stone & Boomer, of Chicago. The bridge is to be finished by December 1st, 1854. The bridge is to have a draw for the passage of vessels, and will be 1,580 feet in length.

SPRINGFIELD, MT. VERNON, AND PITTSBURGH RAILROAD.—The Delaware *Gazette* says the track-layers are about commencing operations west of that place, to meet the party from that place to Marysville. Hopes are expressed that trains will run to the latter place by October, and to Delaware by November, but the state of the work, as represented to us, hardly authorizes it.

PANAMA RAILROAD.—From a correspondent of the New-York *Courier and Enquirer*, we gather the following particulars relative to this road: Five miles more of the track are nearly ready for the cars, and would have been in use ere this, but for the bridge over Chagres river having been swept away. The bridge is nearly rebuilt, and ere the close of the year, it is expected that the road will be completed to Cruces: thence a good road to Panama will make the crossing of the Isthmus tolerable, inasmuch as the boating upon the Chagres river will be dispensed with. From Cruces to Panama, but little has been done towards grading the road: the contractors have thrown up their contracts, and the Company have been compelled to resume the work. Plans are in operation for procuring men, and Colonel Totten hopes to have the work completed within the ensuing year.

THE LA CROSSE and MILWAUKIE road is going ahead rapidly. A competent corps of engineers is busily engaged in prosecuting the surveys and locating the route beyond Rock river. The whole of the line from Milwaukie to Portage City, (about 100 miles) is under contract, and the contractors certify that thus far, for all work done, the estimates have been fully and promptly made. All the sections east of Rock river, a distance of 52 miles, have been sub-let, and between twelve and thirteen hundred men are at work upon them.

PACIFIC RAILROAD.—The Houston (Texas) *Telegraph* asserts that from recent surveys the fact has been revealed that a belt of country, varying from 10 to 100 miles broad, extends quite across the continent, from the Atlantic to the Pacific, which is so level that a railroad can be extended the whole distance without traversing a mountain range. The Pacific Railroad may be extended in an air line from Sacramento to San Diego, on this route, with as little difficulty as on an open plain.

INDIANAPOLIS AND SHELBYVILLE RAILROAD.—The railroad from Indianapolis to Shelbyville is finished. The Jeffersonville Company will run their trains all the way through from Jeffersonville to Indianapolis, for the present, via Shelbyville. This will make the route somewhat longer; but this will be compensated for by there being no change of cars as heretofore at Edinburgh.

NEW-YORK AND ERIE RAILROAD.—The Company have nearly completed the broad track to Jersey City, which will supersede the necessity of changing cars at Paterson. The Erie road is the greatest work of the kind in the world, and no one can pass over it without being deeply impressed with the vastness of the undertaking, and the perseverance necessary to secure its completion. It has brought Buffalo, Niagara Falls, and cities still farther west, within an incredibly short distance of New-York; and in point of speed and safety is not surpassed by any road in the Union. A telegraph extending the whole length of the road, and supplied with skilful operators at various stations, serves an excellent purpose in notifying of accidents or delays. We had a practical illustration of its benefits lately, in company with several passengers who had just arrived at Binghamton from a southern point, some going east, and some west. 'Which way are you going?' said the gentlemanly agent, as we entered the office. 'East,' was the reply. 'Then you will not be delayed,' said he; 'but the passengers going west will be detained one hour and forty-two minutes, on account of an accident to the road east of here, notice of which has just been communicated by our telegraph.' (The accident was occasioned by a drenching rain that had been falling in torrents since an early hour in the morning.) Notice of this accident was communicated to all points west, and thus the cause of the delay of the train was easily explained.

The business of the Erie Railroad is not half what it will be, as the resources of the region through which it passes are more thoroughly developed; and yet its receipts already amount to nearly *half a million of dollars per month!* The President, Homer Ramsdell, Esq., and the Secretary, Nathaniel Marsh, Esq., are gentlemen in whom the community have the utmost confidence; and all connected with the road, whether in an official or subordinate capacity, seek the comfort and safety of the thousands of passengers whom it daily transmits with almost lightning speed over its entire length, a distance of 484 miles!

CAMDEN AND AMBOY RAILROAD.—We never pass over this excellent road without being impressed with the beauty of the scenery which surrounds it, and the excellency of its management; for the latter of which it is mainly indebted to Wm. H. Gatzmer, Esq., of Philadelphia, and Captain Ira Bliss, of New-York, its indefatigable and gentlemanly agents. The Company are running a train that leaves Philadelphia and New-York at 10 o'clock A. M., in which passengers have an opportunity of beholding the beautiful scenery on the Delaware river, the land carriage by this train being only between Amboy and Bordentown. The express train has always passed between New-York and Amboy through the New-York bay, running sometimes outside and sometimes inside of Staten Island, but in either case furnishing the passenger with a view the most beautiful ever witnessed, perhaps not excepting the far-famed Bay of Naples. There is a difference of one dollar in the fare between the express and the accommodation trains, the latter taking about one hour longer by passing between Bordentown and Philadelphia by water, but imparting additional interest to the traveller by giving him a view of the splendid scenery along the banks of the Delaware. The fares are $3 on the express train, which makes the time between the two cities inside of four and a half hours, and $2 on the accommodation train, which requires nearly

six hours. But to those who are in no special haste, the additional time required is fully compensated for by the beautiful objects which constantly arrest the attention as you glide noiselessly over the Delaware on the 'Richard Stockton,' as beautiful a boat as ever floated since the invention of steam. On both trains, the comfort, safety, and speedy transit of passengers are provided for in matters of the smallest minutiæ; and we do not wonder that the Camden and Amboy Railroad ranks high in whatever promotes the happiness of the travelling community.

PHILADELPHIA, WILMINGTON, AND BALTIMORE RAILROAD.—We apprehend that the office of the President of the United States was not quite so annoying from hordes of office-seekers several years since, when a journey to Washington from New-York and Philadelphia was a work of days, and several of them at that, as it now is. Whatever of benefit railroads may have been to the community at large, they have not contributed to the quiet of the office of President, if we may believe the stories we hear about the annoyance he meets with from those who are besieging him for an appointment. The cheap and easy transit to Washington from the North, by way of the above railroad, has doubtless contributed very greatly to swell the numbers of those who have made, and who will yet make, a "pilgrimage" to the city of "magnificent distances." And this brings us to the subject-matter of our present article. The Philadelphia, Wilmington, and Baltimore Railroad has afforded the means for thousands to visit the capital of the nation, who, but for it, would not have enjoyed that pleasure; and it must be some relief to the feelings of a disappointed office-seeker to return to his home on an easy cushioned seat, in a handsome railroad-car, rather than to be jolted in a stage-coach for several days over a rough turnpike-road, as was formerly the case.

We have passed over the above road several times the present season, (albeit WE are *not* office-seekers,) and have noted the improvements which have been and which are constantly making to render the means of transit quick and pleasant between Philadelphia and Baltimore. The Susquehanna river has long been the great and only obstacle in the way of accomplishing these desirable results. But thanks to the President of the road, Saml. M. Felton, Esq., this obstacle is soon to be removed. Mr. Felton has long sought the passage of an act by the Maryland Legislature granting the Company the right to construct a bridge across the Susquehanna, but until recently his most persevering efforts have been unsuccessful. The Company are now making the survey, and at no distant period, a substantial stone bridge across the Susquehanna will attest what can be accomplished by enterprise and perseverance. The road opens a direct route to the West and South-west, by means of its connection with the Baltimore and Ohio Railroad to Wheeling; and during our late visit to Baltimore, we conversed with several passengers who give this the preference over more northern routes.

The Company has the largest and finest dépôt at Philadelphia of any in the country, and during the year past, several powerful locomotives and a number of new and beautiful cars have been placed upon the road, for which, as well as the contemplated bridge across the Susquehanna, the travelling public are indebted to the 'administration' of President Felton. During the ensuing session of Congress, as well as during the entire term of President Pierce's administration, multitudes will visit the nation's capital. Many of these will be warm admirers of President Pierce; but of the thousands who will visit Washington over the Philadelphia, Wilmington, and Baltimore Railroad for the next four years, we opine that President Felton will have by far the largest number of friends!

THE GREAT EXHIBITION.

Does any body call it a failure? Perhaps it is; but if so, we would like to know what success would be In what respect can it be called a failure? It may not be thronged as many anticipated that it would be. There is no crowd there; and one reason why it is not thronged more, is because the people believe the jealous, envious, and false representations that some foolish pedant uttered, or printed, or heard and reported, in its early history. But the merit of the Exhibition is not to be measured by the number of its visitors. And yet it need not be ashamed of the result when judgment is pronounced on that basis, no other exhibition in America having ever been visited by the numbers that have been drawn to the Crystal Palace. It has not the neighborhood of its predecessor in Hyde Park, and the numbers there are no measure for what could be expected here. Besides, that in London was the first of the kind ever known. But of all the thousands of visitors here, we have not heard of one who carefully viewed this collection, who went away dissatisfied. The grumblers are exclusively those that have not seen it at all, or who have occupied only two or three hours in going over the entire building.

In what does it fail? In the useful or in the ornamental? In the foreign or in the domestic? In silk, woollen, linen, or cotton goods? In Plaster or marble, Japan ware or mosaics? In statuary we have all of the renowned works of Hiram Powers, and a score of others equally as good as those. In mosaics, we have the most perfect the world can furnish, one piece of which, by Guercino, is valued at $50,000, and which multitudes mistake for a painting of one of the old masters. In silver and gold ware, we have works so superb, that none but millionaires can dream of purchasing them, and from this downward to those at only a few hundred dollars the set. In porcelain we have the ancient Sèvres of M. Lahoche, his own fine manufactures, and many other qualities down to common ware. In needlework, we have the Gobelin tapestry, and the Beauvais, as well as the handiwork of the wives and daughters of our own yeomanry. In glass, Bohemia sends a few of her choicest specimens. In jewelry, we can suit all tastes, from a necklace worth $15,000, to common painted glass. In mirrors, furniture, pianos, carriages, and such like, we should be glad, but surprised, if better could be found. Watches and clocks surely are well represented, both from Geneva and from London. The agricultural department is very full and complete, from the fancy garden hoe for the young lady, to the huge reaper and raker, drawn by three or four horses. So also in broadcloths and other manufactured goods; the "Bay State" Mills, the manufacturers of Rhode Island, that hive of industry, and of Connecticut, not inferior, and on to Canada and across the ocean, the specimens of excellent products multiply till you are lost in the immense variety, as well as astounded at the excellence of the product. Ladies' apparel and the materials for making it, in all their variety, are fully represented. In flour, sugars, salts, and other eatables, the show is good, though not large. But there are neither cabbages, nor turnips, nor white blackberries. What a pity! In machines, the show is not as large as it ought to be, there being only about 400; but it is large enough for the visitor, and for the building. Patentees and proprietors, we think, in not sending more, have made a great mistake.

The quantity is less than was collected at Hyde Park, but one who carefully examines all these, will not complain that it is so. There is enough to excite

the ambition of the aspiring artist, to enlighten the uninformed, and to gratify the curious; and, for ourself, we rejoice that there is so little mere lumber, whose entire office it is to occupy space and make a GREAT show. The picture gallery is more open to criticism than any other department, but even there is enough of real merit to pay the price of a ticket to the whole exhibition.

But we must proceed with our description of the various departments, as already proposed and commenced; and we resume our work on the lower floor, in the Italian and Austrian courts, opposite the French, already examined.

ITALIAN DEPARTMENT, (Court 6.) As you enter this splendid court, you observe on the right hand, near the entrance, a rural table, suitable for a summer-house or shaded lawn. Next, a series of superb mosaics, chiefly of wrought flowers, and other handsome patterns. On the left, among the beautiful statuettes described in our last number, is a splendid antique cabinet of mosaic on black ebony, representing the palace of the Medici at Florence. Each panel is ornamented in the centre with elegant mosaics, and the arms of the family of the Medici are wrought into the façade. This is from the manufactory of M. Enri Bosi, artist in mosaic and precious stones, Florence.

Beautiful silks and velvets hang from the sides of the court.

Opposite the entrance is a small figure, in silver gauze, representing Columbus; a beautiful work. Behind this, a carved, modern mirror-frame, resting on a table of similar workmanship. These pieces are in very florid style, and exceedingly rich.

Entering the next court (12) on the west nave, are rich mosaics for tables, one of which, of rectangular shape, and with a black ground, is worth $2650 in Paris. Specimens of marbles used in this department of art are also to be noticed.

In the centre are mosaics of wood, very rich. The manufacture of one of these occupied the artist six years, and is valued at $6000. It contains several historical pictures, views of public buildings, &c.

On the left are elegant silks and velvets; mosaic breast-pins, of great beauty, from the manufacture of M. Enri Bosi, Florence; elegantly wrought handkerchiefs, and paper-weights of rich mosaic, coral bracelets and pins, and ornaments of pearl and diamond, very rich.

Against the division between these courts, stands a MOSAIC PICTURE of JOHN THE BAPTIST, sent over by Pope Pius, which is perhaps the most wonderful work of art in the Crystal Palace, if not in the world. It is entirely of mosaic of marble, and though not for sale, is valued at $50,000. The little pieces of which it is composed are, perhaps, an eighth of an inch square, or about 64 to the square inch, and the effect is admirable. The features of the face are most expressive. The lifted eye is intensely eloquent. We can conceive of nothing more perfect. Such work is done now only at the manufactory of the Vatican.

AUSTRIAN DEPARTMENT.—The court adjoining that just described, number 18, is furnished with very rich goods. As you enter, on the right are very elegant glass and porcelain wares, transparent, white, red, blue, green, &c., exhibited by A. Patzebt, Turneau, Bohemia. Close by these is a tall centre-piece for dry preserves, the price of which is $6000. It is formed, not, as one might suppose, of glass, but of rock crystal, while its ornaments are gold. This would not generally be distinguished from other glass wares near it. A superb prismatic drop for a massive chandelier is close by. Bottles of various colors, representing pineapples, and of other fanciful forms, are in perfect taste. Artificial stones, of all colors and shapes, are exhibited by A. Patzebt. Samples of beads, buttons, &c., of cut glass, by Blaschka

& Sons, Liebenau, Bohemia. This court is lined with an assortment of Broche shawls, exhibited by L. Burger & Co. Elegant shawls are also exhibited by Charles Kanitz.

A variety of "Bohemian Produce," of a character similar to those we have described, completes the list found in this court.

In the interior court, numbered 19, we notice a great variety of scythes, sickles, and various cutlery, to which we shall refer again hereafter, also from Austria; maps, some of very large dimensions, and inscribed with various languages, from Turin; geometrical models in glass; a map *in plaster*, showing the surface, &c., of Switzerland; a geological section of the salt mines of that country; fossils, chiefly the ammonite, some very large, more than a foot in diameter, and all very fine; accordeons and other musical instruments, among which are a pellitone, a bombardon, a trumpet in G, with a mechanism for transposition into all keys, and a guitar with twelve strings, of new invention.

The outer court but one on this west nave, numbered 23, contains Japan and Holland goods. As you enter, are found handsome bronze tables, exhibited by L. Shutz, Zeyst, Holland. A handsome silver pitcher of rich design, wrought by the hammer from a single block of silver, an art of the seventeenth century. It is large enough to contain a quart or more of water, and is made by T. G. Grebe, Rotterdam. Elegant marble vases; carvings in ivory, very handsome, by Zeyst, Holland; delicate balances; plated silver, by Gilles Grevink, Amsterdam; elegant swan, goose, and grebe-skin furs, Dutch-dressed, by P. S. Catz & Co., Amsterdam; chamois gloves; tall shades, of glass of elegant quality, from the Netherlandt Company, at Dordrecht; books from Holland.

Japan goods, salvers, boxes, brushes, sandals, as curious as those of the Chinese. Some of these consist of a sort of framework, raising the foot four or five inches above the floor, the whole being fastened to the foot by straps or bands.

On the other side are large retorts of glass, the bowls of which are overlaid with thick copper, by means of electro-magnetism. These are from the metallurgical manufactory in the Netherlands, and are exhibited by J. R. F. Nevergeld, of Hague.

Next are elegant bows and arrows, for shooting-galleries, of most excellent workmanship, by Bressers Brothers, Tilburg. Several handsome models of winding stair-cases, from Holland, are worthy of special notice, exhibited by Gerret Becksez. Epaulettes and tassels, with braids, very handsome, exhibited by W. J. Van Heynsbergen, Hague. Elegant tables, and a superb screen, of Japan painting; a small wheel for spinning linen, of black ebony, ornamented with ivory, very elegant; a large bronze vase, very fine, by L. Schutz, Zeyst. Paper hangings, of various patterns, but exceedingly rich, are suspended from the sides of the court. Those on the right hand are imitations of silks and brocades, and those on the left hand are imitations of woollen velvets. These are exhibited by the heirs of Warnars Willink, Amsterdam. Rich furniture, carved and japanned, occupies the centre of this court.

The contents of the outer court (27) are chiefly from

HOLLAND, and consist of church and ship bells; clocks and scales; a carriage, by Zehmen, of Rotterdam; earth-borer, by J. R. Sandermeyer, Rotterdam; plough and seed-sower, by Jenken, Utrecht; a pheasant's house of East India bamboo, by G. A Barker, Rotterdam. Morse's telegraph is located in this court.

Continuing on into the next court, we find other contributions from Holland, consisting of spermaceti, white lead, and litharge of gold; borax, madder, and other dye-stuffs; starch, glue, oils, prepared provisions, succory, sugars, arrow-root, &c., &c. One side of this court contains the contribution of

HAYTI, sent by his Majesty Faustin I., Emperor of Hayti, through his Consular Agent, Henry Delafield, Esq. It consists of various productions of Hayti, among which are soaps, paper, castor oil, coffee, honey, starch, wax, castor-beans, chocolate-nuts, cloth from the bark of lace-wood and of pepper-wood, water-pots of stone-ware, log-wood, lignum vitæ, fustic, Brazil-wood, D'Haiti hemp and mineral coal. In the same court are contributions from

LIBERIA, of cocoa, coffee and sugar, and grain.

HAVANA, of segars.

This leads us into the court occupied by the products of

BRITISH GUIANA. This court, though quite uninviting at first appearance, abounds with objects of interest. Specimens of maize, rice, coffee, sugar, vanilla, arrow-root, &c.; the fibre of the plantain, ochre, silk-grass, and palm; sections of wood, very handsome, from the Demarara river; a table-top containing 133 pieces of different woods, the growth of the colony; picture-frames of native woods; Indian manufactures, such as baskets, fans, mats, necklaces, beads, bows and arrows, war-clubs, &c. Besides these are preserved fruits, balsams, oils, essences, and chemicals.

From Guiana, we advance into Court 26, and observe hundreds of daguerreotypes, which are sent from nearly all our larger cities, many of which are very fine. But we do not hesitate to adjudge the palm of super-eminence to MASURY & SILSBEE, of BOSTON. This brings us also to a planetarium, very finely contrived for illustrating the movements of the planets, and various astronomical phenomena.

PENMANSHIP. Several specimens of penmanship are exhibited by different teachers of the art. Some of these are very elegant, others only very curious. One card, of drawing-paper size, executed by A. H. Wheeler, of Broadway, is perfectly beautiful. It is very elegant in design, and seems faultless in execution. Another, by Mr. Bristow, is very handsome. A third, by Mr. Davison, is a representation of the Crystal Palace, in which all the lines and shades are formed by microscopic writing. Almost the entire Book of Psalms is exhausted for material. A fourth, called "The House of God," is similarly composed of the Proverbs of Solomon. Probably not one in five hundred would distinguish between these and ordinary drawings in outline. But here we stand by *the contribution* from

NEWFOUNDLAND, which consists of a representation of a ship in the midst of ice and icebergs, and surrounded by their various animals, seals, hippopotami, and other sea animals; above these, in the *second story*, are the land animals and birds of the province. This show is well conceived and well executed, and is of great interest.

This court is lined with several pictures; but what and whence they are, we have not been so particularly interested as to inquire.

If we turn to the left, and enter Court 10, we find numerous specimens of

BOOKBINDING, which, though very good, and making great professions, do not appear to us particularly elegant. The same *wares* are exhibited in Court 17, in which are also a portion of the show of daguerreotypes.

PHILOSOPHICAL APPARATUS.—In Court 17 are several pieces of apparatus, illustrative of geography and natural philosophy, including astronomy. An electro-magnetic battery is in constant operation, and furnishes amusement

for multitudes who try the capacity of their muscles in enduring the contractile power of this wonderful fluid. Here, too, is the STORM INDICATOR, which consists of the electric bells seen in all our chemical cabinets, and which are connected with the lightning-rod outside of the building. The exhibitor says they will foretell a storm from four to seven hours before it is experienced. A gasometer; also, a very large piece of apparatus in appearance, a cylindrical spar for a vessel's use, used by our scientific engineers in the United States Coast Survey, for determining base lines. This brings us to the east nave. In following along the courts on the north side of the nave, we find in the first we shall naturally enter, (4,) goods from the

Hamilton Woollen Co., Southbridge, Mass.,
Dunnell & Co., calico printers,
Rochdale Mills, Rochester, N. H., elegant blankets.

In the next court, (3,) goods from

Lawrence, Stone & Co., Boston, their splendid Bay State shawls, and other goods;
E. Derby & Co.,
E. Slater & Sons, Webster, Mass.,
Edward S. Hall, Millville, Mass.,
John Slade & Co.

In COURT 2, we find contributions from

Manchester, N. H., Print Works,
James Roy & Co., Watervliet Mills,
Dorastus Kellogg, Skaneateles,
L. Pomroy & Sons.

One side of this court is allotted to

CANADA, and contains a carpet wrought entirely by hand, as if it were only a lamp-mat; chair-coverings and tidies in variety; and in the next court, No. 1, straw hats, shawls, snow-shoes, blankets of remarkable weight, and which would seem to defy even polar frosts; drugs are also exhibited, and flour from various kinds of grain. We have only had opportunity to examine that from buck-wheat, and must pronounce this equal to any we have ever seen. Furs of excellent quality are also exhibited from this province. A double phaeton, nameless, but of which the maker has no cause to be ashamed. There is also, near by, a new VENTILATING STOVE, which we purpose to describe in detail elsewhere, if possible. It is a very excellent design, and is invented by Mr. Ruttan.

Passing into the centre of this division, (D,) the only part not already described, we find the very valuable contribution from

DENMARK.—The one contribution from this country consists of the group, CHRIST AND THE APOSTLES, by Thorwaldsen.

This most interesting group of statues is the *original* of this great sculptor, which was placed in one of the churches of Italy, but which has recently been removed, and replaced by copies in marble. This collection is in plaster. The grouping of the apostles, in the Crystal Palace, is in bad taste, and for want of room, the figure of the SAVIOUR is too near for effect. It is larger than life, being intended for a position thirty feet from the rest of the group. St. Paul is "one of the twelve," by what authority we have not learned. This, however, is an exhibition sufficient of itself to attract crowds.

This completes our rapid sketch of the lower floor of division D. We will now ascend the central flight of stairs into the gallery above, and beginning at the eastern end of the row of cases of silver ware, will point out the more interesting objects.

GOLD AND SILVER WARE from the United States, (Gallery, Division D.) The products of our own country overrun the quarter of the Palace designated for them, and occupy space on this division on both floors. The first case of silver ware is from Bailey & Co., Philadelphia. A very beautiful centre-piece, an elegant castor, salts, &c., in elegant patterns, are worthy of especial notice.

Jones, Ball & Poor, Boston, furnish the next cases, with some of the richest goods in the Palace. The famous Webster Vase is among them. Next come Hallersly & Dickinson, Adams & Kidney, Albert, Coles & Co., Joseph Chamberlain, G. F. Atwood, J. & C. Berrian; Rogers & Brothers, Hartford, Ct., plated ware; J. T. Ames, Chickopee, Mass., very handsome; Ames Manufacturing Co., do., very handsome; John Foley, gold pens; G. Zenhore & Co., very elegant bog-wood jewelry; Ball, Black & Co., Broadway, exhibit very elegant silver ware, and also a superb set of California gold, exceedingly rich. They occupy two large cases.

On the left hand is a case furnished with a handsome set of chessmen, the white being solid silver, and their antagonists of gold. On the right, Whillock, of Troy, furnishes a case of Britannia ware.

Here is a point of very great interest. On your left hand is a small case, scarcely eighteen inches square, and three feet high, of very great value. It is from the STUDIO CURIOSO, and is exhibited by Mr. Moon.

The most prominent object in this case, is the marble statuette of a

SLEEPING CUPID, carved from one piece of marble, with a veil of the same, partially covering the head and the shoulders. It is difficult to persuade one that this veil is not of ordinary lace. As a piece of art, this is very exquisite, seldom if ever surpassed. We understand the proprietor has refused $10,000 for it.

In front of the case, on the bottom, is a figure of

PROMETHEUS CHAINED TO THE ROCK. The figure and rock are one solid piece of gold, very finely carved. The body is one large pearl, and round the rock are carbuncles.

FOUR REAL RUBY PERFUME-BOTTLES, once the property of Ferdinand of Spain, and late the property of General Radsminski, are in the corners of the case.

ANTIQUE SNUFF-BOX, inlaid with gold, silver, and pearls of all colors, is on the right hand, in the rear. The top represents a farm-yard, birds, finely executed, a church, &c. On one side is a fox, wrought in gold, and a rabbit in silver. On another is Tower Hill, London; on a third, Shakspeare's house; and on the fourth, a peacock feeding. This too has been owned by some very distinguished personages.

CORAL CARVINGS are seen on each side of the case, on the top of inverted vases. That on the left represents MINERVA, with her helmet and shield, and that on the right is the figure of MERCURY. Each of these is about four inches long. Mercury stands upon a pedestal of *lapis lazuli*.

A WATCH, in the shape of a basket, inlaid with rubies and emeralds, hangs on a pyramid. Upon the face are small figures, playing on different instruments. It plays several distinct airs, and was worn by the present Queen of Spain.

AN OPAL, in the shape of a heart, "the largest and most beautiful ever seen in this country," lies in front of the Cupid, near the centre of the case.

AN ANTIQUE SAUCER, of red cornelian, very finely cut, from Russia, is near the centre.

A GOLD SPOON, with a red cornelian bowl, from the Duke of Buckingham, is seen on the right.

A WHITE MOUSE, in a morocco case, with key and brush, is seen at the left This mouse was the pet of Dolza Donez, a Spanish lady, who was so fond of it, that when it died, she had it preserved so that she could play with it, and by *clock-work* make it move round the room.

BRAHMESE CARVING IN IVORY, representing a plough, a ploughboy, and Brahmese oxen.

FLORENTINE MOSAICS of birds and flowers, very fine, are in front of the perfume bottles.

NAPOLEON, in a ring, taken at Fontainbleau, and presented by Louis Napoleon to Lady Blessington, is near the centre.

ENAMEL RING OF NAPOLEON—the face being shaded by figures representing living beings, the epaulêtte in the form of a hand, and on his breast, a map of the countries which he conquered. This is a little to the right of the saucer, in the lower row of rings. It requires a magnifying-glass to see these peculiarities.

A CURIOUS WATCH in a ring, worn by Napoleon. The watch is set in a stone of an oblong form. It is in the saucer to the left of the ring before referred to. It was sold from the collection of Louis Philippe, at Claremont.

Other rings contain the heads of notable persons, and have been owned and worn by those as celebrated. But we have not room for more particulars of this sort.

THE FRONT PORTICO OF THE CATHEDRAL OF RHEIMS, with its clock and spires, in miniature form, in gilt, stands upon the top of this case.

Leaving this attractive case, we next find on our right the silver and gold ware of Tiffany & Co., Broadway. A splendid centre-piece, of elegant design, weighs 1000 ounces. Porcelain cups with gold ornaments surrounding them are very superb. But the greatest attraction is a necklace, of a single row of pearls, with one splendid diamond, which is worth $15,000.

Marchand Aîné, Gaime, Guillemot & Co., furnish the next case, with very rich jewelry, diamonds, pearls, &c.

A case of far less pretension stands next in order, furnished with silks and velvets, which obtained the prize in the exhibition in Hyde Park. It is exhibited by Giacomo Chichiza & Co., of Turin.

We then come to a table furnished with marble mosaics, busts, statuettes, and paintings, from Florence, some of which are very handsome. Then "wood tresses" or braids, as we generally call them, sieves of horse-hair, &c., by A. Loker, Krainsburg, Illyricum. Patent leathers, elegant straw braids, watches and bracelets, and other jewelry from Switzerland.

This display of watches is very superb and also very extensive. Some are plain, many are enamelled and are jewelled, not only within but without. The jewels are both pearls and diamonds, the latter in the form of flowers. Some are painted, representing Cupids, &c. One of them, "the Lilliputian watch," is about the size of a three-cent piece, and is perfect. Some are "chronometers." The exhibitors are Messrs. Monlandon Frères, H. A. Farre, D. Bachelard & Son, Patek Philippe & Co., E. & A. Paillard & Frères, H. L. Matile, Jr., Gustave Dubois, C. Henri Groselande, Reigel & Petitpierre, Lequin & Yersen.

Passing down the other side of the same tables, we find

AUSTRIAN goods in variety, canvas, straw braids, muslins, shawls, tablecloths, &c.

ITALY supplies the next table with elegant brushes, mosaics, paintings, and statuettes.

Entering the next narrow passage parallel to this,

AUSTRIA exhibits bead-work, over-coats of very substantial material and superbly made, dress-coats of superb workmanship, musical instruments, wrought pipes and cane-heads, and straw-work.

SWITZERLAND covers the tables beyond with rich muslins, most beautiful cuttings and carvings in wood, which are among the most attractive exhibitions in the Palace; prints, pianofortes, a fine map of the several cantons of Switzerland, various paintings of Alpine scenery, engravings (colored and uncolored) of Geneva, figures in *terra cotta*, wood models, a wooden leg, "made on scientific principles," muff, tippet, and cuffs of Grebe's fur, muslins, silks, white lead, artificial pumice-stone, geometrical models, colors, models in crystal, artificial flowers, chemical apparatus, (glass,) wool, tobacco, oil in capsules, and most superb leghorns.

This leads into a court partially occupied by goods from

CHINA. These consist of ladies' work-boxes, tea-sets in variety, and many specimens of muslin, manufactured from the bark of the pine-apple. It is as fine as a e many samples of "India muslin."

Near by stands a case of "Paris mantillas," exhibited (and manufactured?) by a Broadway house; also sundry quilts of common patch-work, unworthy a place in such an exhibition; pictures in worsted, *ditto;* a Brussels carpet, of fair quality, made by Higgins & Co., New-York. Some superb riding-saddles and military saddles cannot fail to attract notice. Specimens of the skill of the dentist are found here. Still farther on are very beautiful harnesses, the ornaments of which are wrought with turkey quills, which exceed any thing of the kind we have seen elsewhere, and which are valued at $500 a pair. The mounting is of silver. Most of these are from Newark, N. J. Many articles of like kind and of home productions occupy this part of this gallery. Turning to the right about, into the next passage-way, we meet with trusses and other surgical appliances, gold leaf, &c., coach laces and tassels.

This brings us to the head of the stairs where we were directed to enter this gallery; and though our account of its contents is but a sample rather than a description, we will follow on by the silver wares already described, and by the elegant Swiss watches, to the

GALLERY OVER THE NORTHERN NAVE.

The first case is furnished with very rich gold and silver ware, from M. Odiot, of Paris, consisting of several superb sets of silver, two or three of gold, a splendid centre-piece of silver of elegant design; fruit and cake-baskets, in taste and finish unequalled in the Crystal Palace.

On the next table is very splendid silver-plated ware. Some of it is gorgeous. This covering is laid on by electro-magnetism. The silver is in solution, the vessel to be plated is immersed in it and is then connected with the two poles of the battery, and thus the silver is slowly deposited upon the surface, and becomes thicker the longer the process is continued. A pair of tall vases, perhaps three feet in height, of very florid workmanship, stand, one at each end of the table.

An immense vase of silver, of very florid style, is without a label or other token by which its origin can be traced.

Next is the *Crystallerie de Clichy*, from Paris, of course, and very beautiful. We have here the most elegant collection of paper-weights we have ever seen. Some represent flowers, others portraits, and some groups of persons; a few contain dials and indices for the month, the day, &c., and are very con-

venient as well as ornamental. We have here also many superb specimens of the richest glass-ware and porcelain, elegant in form and in color. This is one of the most beautiful tables in the Palace.

Passing along, we find a display of Britannia ware, dentistry, microscopes, very fine jewelry, artificial flowers, and bronzes, very handsome. Returning on the opposite sides of these tables, are timepieces, candelabras, &c., and on your left hand are richly wrought veils, tassels, passementeries, metallic and silk, from Paris. You are almost deceived by noticing what seems to be a living and beautiful dog, and in a very pretty house just suited to him.

Porcelain ware, very handsome, is exhibited on the tables beyond, by Haveland & Cie., who have an agency at 47 John street. Wares of this description cover several tables, and are exhibited by different contributors.

Patent tanned leather, of excellent quality, boots and shoes of various *materiel*, bonneterie de laine, by Jaques Amos, bas rhin, wrought veils, muslins, &c., are also on these tables.

Carpets of various kinds are suspended from convenient points in this gallery.

Upon the tables, as you approach the western side of the south gallery, are varieties from the *German States;* gloves, perfumery, wrought shirts, etc., etc.

Gulliver among the Lilliputians, described in a previous number, excites much attention.

Near the end of this gallery, among a multitude of German toys, are some cuttings in ivory, very beautiful, chessmen, and handsome transparencies.

Turning into the next aisle, we find paintings from Holland in great variety, some of which are very fine; ivory cuttings and cuttings in wood are well worthy of notice; portemonnaies, bonnets and vestings; and as you advance, on the left hand, are woollen hose, caps and jackets, and on the right hand, combs, hair-work, fringes, woollen goods, a superbly-wrought lady's cloak, wrought shoes, &c., &c.

Beyond these are gold leaf, bronze powder, metallic leaf of various kinds, philosophical and chemical apparatus. Straw-work in variety is on the table at the end.

In the next aisle are surgeons' instruments, porcelain wares, worsteds, beads, shell-work, bronzes, some very excellent; gilt, silvered, and copper wire, pencils, toys, &c., &c., from Prussia, Bavaria, Saxony, and from Mentz.

(TO BE CONTINUED.)

STATUARY.

Since our catalogue of this department was prepared, we have noticed that two or three of these works of art have been removed to other places, and one group in the southern nave has entirely disappeared. We also omitted the huge statue of Washington under the dome.

WASHINGTON, sent by the State of Virginia, has recently been placed in the western nave. Also, a bust of Washington.

A half dozen have also been added, which are arranged about the base of the bronze "Amazon and Tiger," by Kiss.

On the right extreme of the row is

PRAYER, or SAMUEL, a most beautiful work, full of expression, by Guaccerini. Then,

A BACCHANTE, a bust, by Ives.

MATERNAL SOLICITUDE, by Benzoni. This is a perfect gem. A beautiful boy is holding a little pet puppy in his hand, while its mother, on the other side of the boy, is anxiously looking up to see if all is safe. The posture and all the details in this group are faultless, and quite bewitching.

RUTH, by Ives, a bust, with a very beautiful profile, but not so perfect in its front view.

BACCO, a statuette, by Guaccerini.

BACCHANTE, a statuette, by Lucendi.

We had intended to add a few more explanations or illustrations of these statues in our October number, but our space was preöccupied. We give below a few additions of this sort.

DIANA was the goddess of light, and represented the moon, as Apollo, her twin brother, did the sun.

PSYCHE is represented in the Palace by several statues. She was the youngest of three daughters of a king, and by her beauty excited the jealousy of Venus. She, to avenge herself, ordered Cupid to inspire Psyche with love for the most contemptible of men. But he himself fell in love with her. His visits being only in the night, she knew not what he was, and her jealous sisters attempted to persuade her that he was an ugly monster. To satisfy herself on this point, she obtained a lamp, and found that he was the most beautiful of the gods. But in her excitement, she let a drop of oil fall on his shoulder, which awoke him. Cupid censured her for her mistrust, and escaped. She wandered long in search of him, (and hence the idea of the 'Grieving Psyche,' under the dome,) and attempted to drown herself. At last she came to the palace of Venus, who detained her, and treated her as a slave, imposing upon her the hardest and most humiliating labors. But Cupid still loved her in secret, and invisibly comforted and assisted her, and by his help she overcame the hatred of Venus, was made immortal, and was united to him for ever. (This part of the myth is the foundation for the group, 'Cupid and Psyche,' in the nave leading from the Sixth Avenue.)

MERCURY was the son of Jupiter and Maia, the daughter of Atlas. He is represented as a cunning thief, having, a day after his birth, stolen several of the oxen of Apollo. He also invented the lyre, forming it from the shell of a tortoise, and drawing strings across it. He was employed as the herald of the gods, and performed many important services.

CERES was the daughter of Saturn and Rhea, and sister of Jupiter, by whom she became the mother of Proserpine.

APOLLO was the son of Jupiter and Latona, and twin brother of Diana, and was represented in diverse characters; 1, as the god who punished; 2, as the god who afforded help and warded off evil; 3, the god of prophecy; 4, the god of song and music; 5, the protector of flocks and herds; 6, the god who fostered towns and civil institutions; 7, the god of the day, or the sun. The Apollo Belvidere, at Rome, is one of the most beautiful representations of him. (See bust in east nave.)

PARIS was the son of Priam and Hecuba, and at his birth was exposed on Mount Ida. But he was nourished by a she bear. The shepherd who exposed him, afterwards found him and took him to his own home. The most celebrated act of his life was his abduction of Helen, wife of Menelaus, which led to the famous Trojan war. Bust in Italian court.

The names of the foregoing divinities, &c., were given in their proper place in our October number, but chiefly without explanation.

THE PICTURE GALLERY.

We have already suggested that this part of the Exhibition is most open to criticism, but it is true, nevertheless, that there are many very excellent pictures. Those we have mentioned in a short article on painting and painters, on another page, (310,) are enough to pay for visiting this department, were the rest only plain canvas. We have not occupied so much time as we could wish, perhaps some six or eight hours only, on this attractive section, but we believe we are right in commending the following paintings to the careful notice of the visitor. We follow in the order of the numbers of the "official catalogue." Some that are very excellent, but very simple, requiring but little comparative skill, are not mentioned in our list. A few pictures we have merely described as worthy to be classed in list No. 1, No. 2, or No. 3. No. 1 is of the highest merit, which, of course, includes but very few. The other two lists are inferior, but those of No. 3 are very decidedly superior to the average merit of the whole collection.

No. 5. Oil portrait of Shakspeare, artist unknown, England.

This is a splendid head, and is supposed to be 'an early copy from the "Chandos."'

8. The Royal Family of England, by H. Winterhalter, London.

As a piece of art, this is not remarkable, perhaps, though it is very creditable to the artist. As the contribution of one of the best and worthiest of the sovereigns of Europe, it demands most especial notice. It being sent by Queen VICTORIA herself, it may be relied upon as a faithful portrait of the personages whom it represents.

12. The Angel of Death bearing off a young girl.

This is by the great painter, HORACE VERNET. It is quite original in its design. The angel is veiled, and in dark shadow. But his wings are in a brighter light, and are most exquisitely painted. The father is leaning upon the bed, with his face buried in its drapery. This picture belongs in the first class.

16. Deputation of Workmen before the City Council, by J. P. Hasenclever, Dusseldorf.

This is an admirable picture, and enough to place the artist in the first rank among modern painters.

27. Ieronimus Jobs, a night-watchman, by the same.

This belongs to list No. 2.

32. Scene in a school-room of the "Jobsiade," (a comic heroic song of 1800,) by the same.

This is less finished than No. 16, and is somewhat caricatured, but it is capitally done.

38. The Rising Thunderstorm, by Augustus Weber, Dusseldorf.

A beautiful picture. List No. 2.

42. Hasenclever, the artist of 16, 27, and 32, representing himself as "The wine taster." A very life-like picture.

87. Columbus, receiving a letter of recommendation to Queen Isabella, by A. Puccinelli, Florence.

This deserves a place among the best in the Palace.

98. St. Martin de Cluse, in the Dauphinée, by A. Dubuisson, France.

This we rank in list No. 2. It is a very fine view of mountain scenery, with its huts, cattle, shepherds, &c.

110. Revolution in the Studio, by John Wilms, Dusseldorf.

The whole design and execution of this is admirable. Here are the paint-

er's easel, sword, gun, bullet-mould, cap, &c., &c., all laid up carefully in a pile, by the thorough chambermaid, preparatory to removal.

111. Neapolitan Gleaner, by Fiorazzi, Florence.

This little picture is at least in list No. 3.

115. The last moments of Tasso, by Theodore V. Oer, Dresden.

This ranks, in our judgment, with the Gleaner.

120. Sunset view, near Naples, by Louis Gurlitt, Vienna.

This landscape is exceedingly beautiful, and may be studied a long time.

126. Galileo before the Council of Urban VIII., by A. F. Ewald, Berlin.

The figure and countenance of the aged astronomer are very fine, while the members of the Council are very well represented.

128. Ruins of an ancient Temple, by M. Schmit, Germany.

In general merit this is like that of No. 120.

131. Bacchus presented to Silenus, by Giacomo Conti, Florence.

A well-grouped company of Bacchanalians, skilfully painted.

143. Execution of Marino Faliero, by F. Schneider, Munich.

This is excellent, and belongs on list No. 2.

144. St. Cecelia, by Guido Reni, Italy.

This painting is *certified* as a genuine original of the great master. It is certainly a capital picture, whether an original or copy.

161. The Mendicant, by Kassel, Breslau.

This picture is horridly and loathsomely perfect.

167. The Calculating Cook, by Moritz, Germany.

A very sage conception of a very important personage. She is making calculations for the day. It is painted by a good artist.

175. Judith with the head of Holofernes, by Conrad Hitz, Munich.

This is in a style unlike any other in the gallery, and is exceedingly well done. It should be ranked in list No. 2.

184. The Arch of Janus, in Rome, during an overflow of the Tiber, by F. W. Baker, England.

A good work of art, list No. 2, representing a very remarkable pile. The arch is double; that is, there are arches on all sides the square pile.

190. The return of Regulus to Carthage, by Cammuccini, Italy.

This is a superb picture, and ought to stand among the first in list No. 1. It represents Regulus, surrounded by his wife and friends and soldiers, at the moment when he is bidding them farewell.

212. Power of Music, by W. S. Mount, New-York.

This painting has been engraved. The musicians are in a stable, while the modest negro listens on the outside. It is a fine picture.

240. Greeks at Missolonghi, by Perignon, France.

A spirited battle-scene, illustrating one of the most terrible and important events in modern history.

255. Death of an Italian Volunteer, by Emilie Tapi, Florence.

This little painting deserves a location where its excellences can be better seen. It ranks in list No. 2.

257. Landscape, by G. Camino, Turin.

This is a fine picture of mountain scenery, with its deep chasms. List No. 2.

263. David calming Saul with the sound of his harp, by G. Maccio, Italy.

The figure and countenance of Saul are admirably represented, but the figure of David is indifferent. He never looked like the youth here painted.

266. French Squadron, marine view, by Morel, France.

This is one of the best pictures of the kind we have ever seen.

268. Portrait of "Father Gavazzi," by Fagnani, New-York.

This is clearly the most perfect likeness that we ever have seen on canvas. As such, it is without fault or defect. It is also good painting.

280. The Pilgrim, by Professor C. N. Carta, Rome.

As a work of art, list No. 2. But no *honest* pilgrim ever had so *carnal* a face.

296. Landscape, Swiss scenery, by Bernhard Fries, Heidelberg.

List No. 2.

301. Wreckers, by Ed. Luminais, France.

This is painfully expressive, and is unquestionably the work of a true artist. Were the touch a little more delicate, it would belong to list No. 1.

309. Landing of Columbus at Santa Cruz, by A. Colin, France.

A conception of doubtful propriety, as an historical fact, but exceedingly well done. Some very obvious anachronisms will appear to a careful observer.

314. Madonna and Child, by Carlo Dolci, Italy.

This is the property of Mr. White, of New-York. It is certainly an admirable work of art, and may be the original of this master.

325. Corpse of a female driven ashore, defended against the attacks of an eagle by two fisherman's dogs, by John Hilverdine, Holland.

This picture is sadly attractive, and shows great skill in the artist.

329. Landscape; view of a lake and Alps, by Tepping, Switzerland.

A fine view of lofty mountain scenery, and its quiet lakes.

334. Two ladies reading by lamplight, by P. Kiers, Holland.

List No. 2.

343. A steamer near the coast, by C. C. Kennemann, Holland.

List No. 2.

340. Landscape, by Tepping.

Very similar in merit to 329, by the same artist.

349. The Assumption of the Virgin, on parchment, by CORREGGIO.

This is a design worthy of this great master; and the many figures represented within a very small compass, are exceedingly well done. It may be an "original."

365. The Temptation of St. Anthony, by "David Teniers."

This small picture is unique in its conception, and is perhaps an original. It stands in bad light.

370. Adoration of the Magi, by Carlo Maratti.

This may be an original: its merits are obvious.

372. Magdalen with Vase, by Francesco Barbieri, called also Guercino.

Perhaps more critical eyes would decide this to be an original.

373. Marine piece, by Jos. Vernet.

List No. 2.

374. Interior of a house, by Adrian Van Ostade.

This "original" of the great Flemish painter is not destitute of great merit.

401. Landscape in water colors, by Eugene Douler, France.

This is exceedingly pretty, and is the work of a good artist.

406. Mountainous landscape, by Michel Banquet, France.

List No. 2.

415. Mouth of a river in Holland, by A. Waldorp, Holland.

List No. 2.

419. The four ages of man's life, by Cæsar Paganini, Florence.

A fine design, capitally executed.

441. Town in Belgium, by Van Moer, Belgium.
List No. 3.

461. Landscape, by Geo. D. Brewerton, "United States."
List No. 2.

474. An inundation on the borders of the Loire, by A. Antigua, France.
List No. 2.

489. Seizure of Charlotte Corday, after she had killed Marat, by Madam F. O'Connell, France.

This is a very superior work, well designed, and in good keeping throughout. It belongs in list No. 1.

500. Cattle in a stable, by Auguste Knip, Holland.

This is manifestly by a practical man. It contains all the apparatus of old jugs, boots, lanterns, et id omne genus, which accumulate in the course of years in such a building.

510. Diogenes successful, by F. Anelli, New-York.

Somewhat marvellous in conception, but well painted. The head of Diogenes is very fine. List No. 2.

524. Midnight reflections on a skull, by P. Van Schendel, Belgium.

This young lady certainly had a very singular taste, but the artist has painted her with excellent skill. We are not sure, however, of the correctness of the portrait. Such a face would never reflect over a skull by lamplight.

533. The Flemish lawyer, by J. Getoni, Belgium.
Capital. List No. 2.

534. Portrait of Chief Justice Marshall, by J. B. Martin, "United States."

This is an excellent likeness, we are assured; and we are quite *sure* it is the likeness of one of the best and greatest of jurists, and is executed with great ability by the artist.

538. Cattle, by D. V. S. Backhuysen, Holland.

It was singular that he should detect that cow in the peculiar position here represented, to wit, between lying down and standing up. It is rather difficult to prove it faulty, but *quere.*

552. View on the Maas, Belgium, by Pierre T. Van Elvers, Holland.
List No. 2.

554. Rustic landscape, by Bodeman, Holland.
Very fair. List No. 2.

558. Fisherman's hut on fire, by Ch. Hubner, France.

This picture is full of expression, all true to the life. It ranks with the best works of living painters to be found in the gallery.

559. Setter and duck, by Leon Viardot, France.

This is a beautiful picture, among the best of the kind we have ever seen.

567. Family devotions, by Charles Hubner, Germany.

This exquisitely fine picture represents a family group, in a peasant's cottage, listening to the youngest child, a fine boy, as he reads aloud. The expression which the skilful artist has given to the different members of the family, various and yet all devout, is in admirable keeping, and the whole is unalloyed by a single defect. This painting must rank with 16, 110, 190, and the few of class No. 1 in this gallery.

579. Music, mathematical instruments, books, &c., on a table, by Damaresq, France.

This painting is not one that would excite the attention of the crowd, but a practised eye detects at once, in its grouping, so finely pictured, the skill of an artist. Nothing is distorted, and all the parts are harmonious. List No. 2.

585 and 596. The Adulteress at the feet of Christ, by Em. Signol, France.

These two represent the same scene at different moments of time. In the first, the face of the sinner is buried in the folds of her undress, as if utterly subdued with grief. In the other, the Saviour holds her arm by his hand, and she looks up to his face, her eyes full of tears, and her countenance expressing the hope she scarcely dares to entertain, of unexpected deliverance. List No. 1. The countenance of the Saviour is much better in 596 than in 585, in which the forehead is quite too low.

590. Woodland and brook, by Vanden Sande, Holland.

List No. 2.

591. Shipwrecked persons attacked by a shark, by Biard, France.

A small company are saved from drowning upon a raft. One man lies lifeless. A female has fainted in the arms of a friend, while another is striving to drive away a shark, whose jaws are extended to seize the limbs of the fainting woman. His hat is seen in the water. The grouping and the coloring are most excellent.

600. Landscape view in Norway, by C. Grolig, France.

List No. 2.

610. The bookworm, by Spitzwig, Munich.

This little picture, overlooked probably by the crowd, is a perfect gem. The countenance of the bookworm, his position on the steps, by the side of the lamp, reading metaphysics from a book in his left hand, while his right hand holds another, also open, and his legs hold a third—all are capital. It could not easily be improved. List No. 1.

611. Landscape, by Koekoek, Holland.

List No. 2.

616. Washington crossing the Delaware, by E. Leutze, United States.

This is a magnificent painting, particularly the figure of Washington. There is more presence in it, perhaps, than the truth would warrant, regarding it as a portrait, but the whole picture is very fine. It is just engraved in excellent style by Williams, Stevens & Williams, of Broadway.

626. Outside of a farm-house, by H. Huggens, Holland.

List No. 2.

629. Christopher Columbus at Salamanca, by A. Colin, France.

The hero of the picture is attempting to convince his royal and noble auditors of the existence of the unknown continent.

649. Madonna and child, by Murillo, Spain.

Very much defaced, and unfortunately *not* "restored" in keeping with the original.

651. Battle of Culm, by Professor Recklin, Berlin.

This huge picture is a capital representation of Marshal Vandam, surrendering himself as prisoner to Alexander of Russia and the King of Prussia, who were then *in retreat* before the army of Napoleon. The figure of the wounded marshal is admirable. This hangs over one of the stairways, of course out of the gallery.

652. Mary Magdalen, by Guido Reni, Italy.

This "original" was contributed by the British consul at Baltimore, Md. It is placed too high to be critically examined. It may be the work of this great painter.

St. Peter, by Carlo Dolce.

We have little doubt that this is an original of this great master. It hangs nearly opposite No. 1, quite low, and in bad light. It is a superb picture. It is not numbered.

There are other good pictures, but perhaps none of them exhibit so much skill in the artist as those here selected. Many others exhibit very excellent points, but have also striking defects, and hence the general effect is spoiled. Such is No. 435 of the official catalogue, and also 518, by the great artist, Rembrandt Peale. The body of the horse is out of proportion, and the curve of his neck unnatural. 606 is another instance of this kind. It is a farm-yard scene, in most respects very well done. But the legs of some of the horses are monstrous, even for draught-horses, as these are; and the proportion of some other animals do not speak well for the judgment of their purchaser.

These defects, though slight, are sometimes fatal. They remind us of a similar *blunder*, or something worse, in the architecture of a fine church in the Fifth Avenue, in which the entire frame-work which supports the upper roof rests on the tops of human heads!

UNITED STATES AGRICULTURAL DEPARTMENT.

We resume our description of the agricultural implements on exhibition in the South-East Gallery, commencing nearly where we concluded in the preceding number.

IMPROVED STAVE-CUTTER AND JOINTING MACHINE.

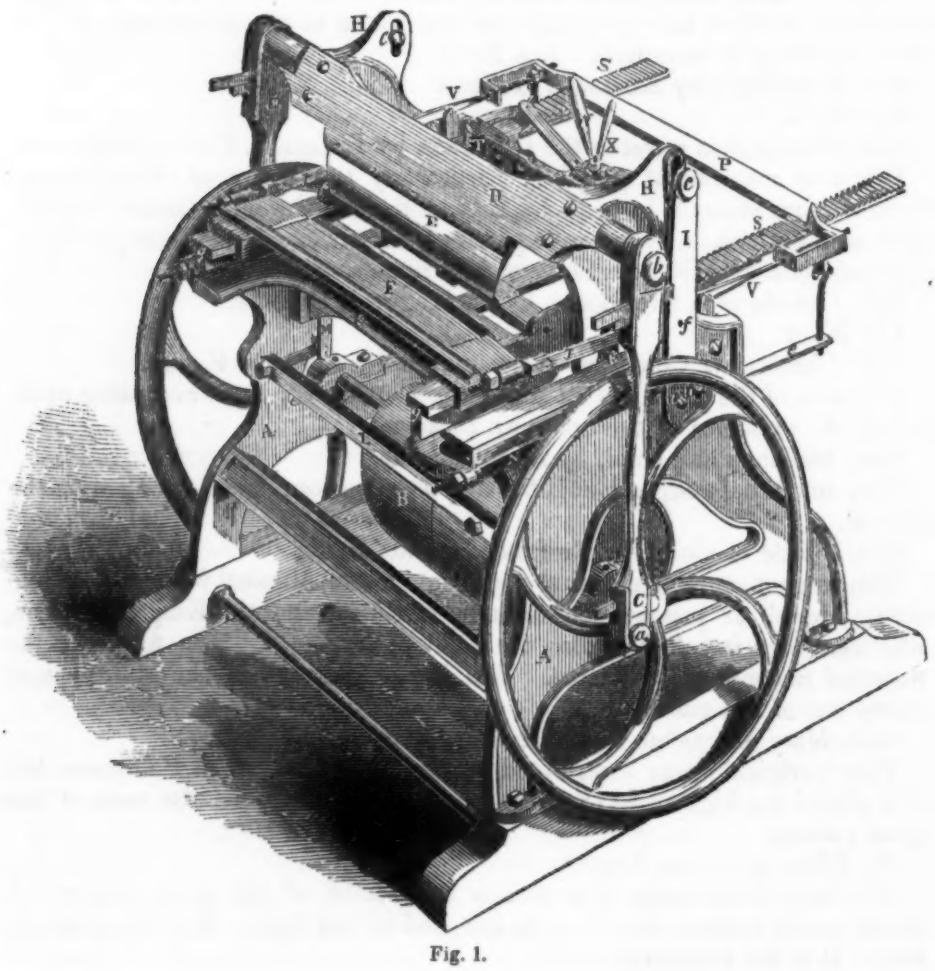


Fig. 1.

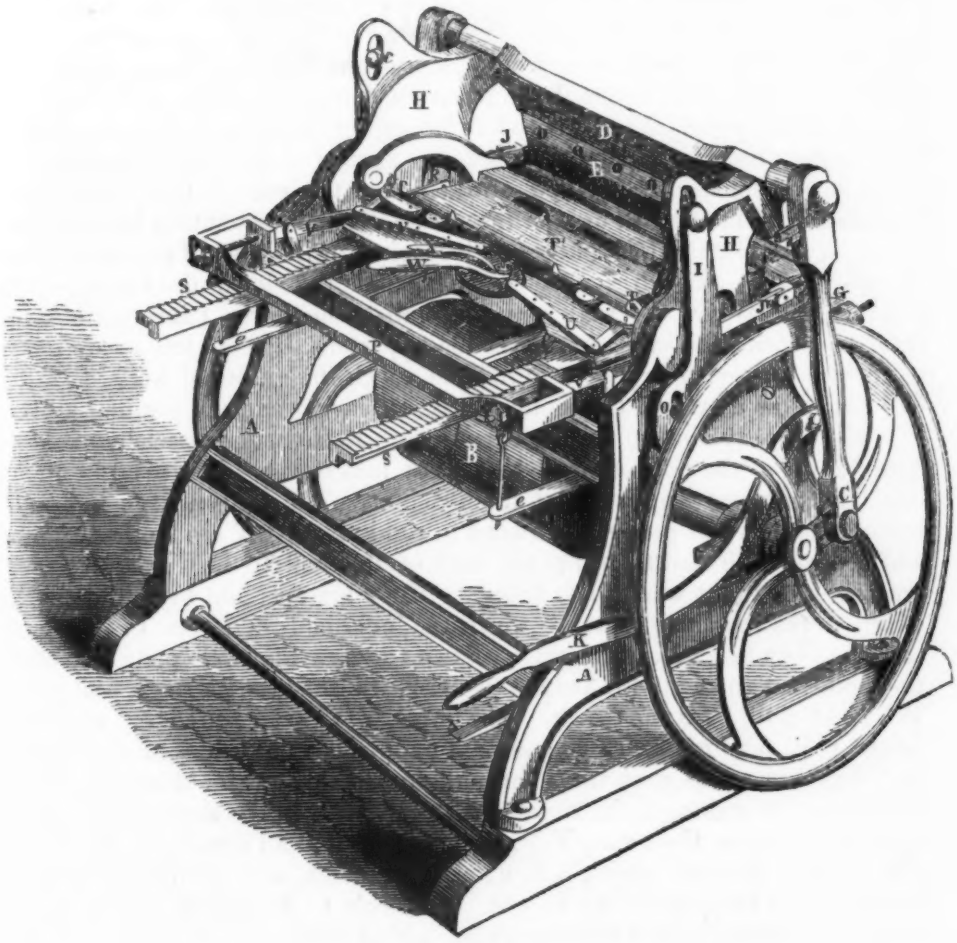


Fig. 2.

The annexed engravings are perspective views (figure 1 a view in front of the knives, and figure 2 a view behind the knives) of an improved machine for cutting and jointing staves, &c., invented by Charles Mowry. The assignees of the patent, with the exception of New-York State, are Messrs. Gwynes & Shefield, of Urbana, Ohio.

For this machine the logs are first sawn into a plank about four and a half inches thick, and then cut into bolts the desired length of the stave. The bolt is softened by steam or warm water, then placed on the machine, and cut and jointed while warm.

AA are the standards of the frame of the machine, and B represents a fast and loose pulley on the main shaft, for driving the machine by a belt, and for setting it free when required; C is a connecting-rod attached to the crank-pin, *a*, and to the wrist, *b*, of the knife-stock, D; E is the cleaving-knife. (There is a fly-wheel, connecting-rod, &c., on each side—the one a duplicate of the other.) The knife, E, receives a vibratory motion, and describes a vertical curve; *d* is the journal on which the arm, I, vibrates; *e* is a pin passing through a slot in the back of shoulders, H H, of the knife-stock, D. The said shoulders are fixed on journals to allow the knife-stock to vibrate, when the rod, C, moves up and down to raise the knife, E, and bring it down again upon the bolt of wood to be cut into a stave, &c.; F and G are the two stocks

of the jointing knives, the separate operations of cleaving the stave and jointing it being performed through the agency of the same connecting-rods. The jointing-knives have a horizontal motion, and are placed one above the other; the arms that move them receive a vibratory motion, as follows: *f*, figure 1, is the pivot-joint of the rod, J, belonging to the upper jointing-knife, F. As the arm, I, is moved through the agency of the pin, *c*, working in the slot of shoulder, H, as said arm vibrates, the rods, J J, are moved in towards and from the bolt to joint the stave. The lower jointing-knife, G, has the inner end of its rod, N, hung on pivot-joints in the sides of the frame, and the pin, O, (one on each side,) projects through the slot in the lower part of the arm, I. When the said arm is vibrated, the lower jointing-knife will therefore receive the same motion as the upper one. These knives are made to cut the proper taper; *g g* are rails on which the guides of knife, F, slide. We have thus described the motions of the cleaving and the jointing-knives. We will now explain the feeding operations. Reference is especially made to figure 2. T is the bolt of wood to be cut into staves. It is placed on four iron bars, running lengthwise of the machine. The feed-carriage comes up behind the bolt and pushes it forward to the knives; T T are toothed clamps which have teeth that take into the ends of the bolt to hold it firm; U U are the levers that work these clamps. They are operated by the lever, W, which works the circle plate, to which the inner ends of levers, U U, are attached. The lever, X, is merely a wrench to screw the circle plate fast when the bolt is clamped; S S are the two racks of the feed-carriage, and arms, V V, and pall, P, is the feeder. The arms, V V, are secured on vibrating heads, R R, (one on each side,) secured on pivots in the sides of the frame, and they have pins projecting through curved slots in the shoulders, H H. When the shoulders, H H, vibrate, the pins at R, in the slots, are so acted upon as to move the arms, V V, back and forth, and thus make the broad pall, P, take into the racks, S S, notch after notch, and push them forward one notch for every stave to be cut. The bolt to be cut into staves passes under a guide-plate or swinging-bridge behind knife, E, in figure 2. When the bolt of wood is all cut up, by bearing down on lever Z, (letter turned,) it throws up the pall, P, and allows the feed-carriage to be moved back for a new bolt. The lever Z, therefore, regulates the feed motion.

The upper jointing-knife can be raised so as to regulate its position for staves of different sizes. In figure 1, L is a bar in front which vibrates in bearings in the frame, and is attached to suspended arms, M M, which are jointed to the swinging frame in which the knife-stock, F, is placed, and also the guide-bridge behind the knives. The lever, K, figure 2, is attached at one side to the bar, L, figure 1, and works it, therefore, by moving the lever to any desired point, up or down; the upper jointing-knife is placed so as to set the knives for operation, for staves of different widths; *e e* are simply screws working in bars, and are employed to make the pall, P, bite in the rack. The jointing-knives act before the descending knife, E, and when they recede, the said knife descends, cleaves out the stave, and it is then finished. The machine, although it may appear complicated, is really not so; a close attention to the figures and description will render its operation plain. It cuts and joints one hundred staves in a minute. We have seen a number of staves which were finished in one of these machines, and we can speak in the highest terms of the finish.—*Scientific American, April* 9.

This machine is made entirely of iron and steel, is about five feet in height, and some five feet square, simple in construction, strong and durable, and not liable to get out of order. It is driven by a belt from a pulley on a shaft,

extending across the lower part of the machine, projecting some six inches on either side. On the shaft, at both ends, is a balance-wheel. The shaft crosses the machine underneath the feeding-carriage and cutting and jointing-knives. From a wrist or crank on the outside of each balance-wheel, a pitman of about three feet connects with a journal on the end of a cross-head, or knife-frame, to which is attached the main cutting-knife, and these connections give motion to all parts of the machine, the feed-carriage, jointing-knives, &c.

The bolt of wood, of proper length for the desired stave, is placed upon the feeding-carriage, firmly secured by merely moving a lever. The machine is not stopped to receive the bolt of wood, but being in motion, the carriage feeds forward the thickness of one stave at each revolution. Two jointing-knives, working forward and back, with great precision, and at nearly right angles with the main cutting-knife, work into the face of the bolt the thickness of one stave only at a time, as the bolt is fed forward, and while the main cutting-knife is rising upon the radius of a circle. The weight of the machine is about 3000 pounds.

As the pitmen pass their centres, and the main cutting-knife commences its downward movement, the jointing-knives are retiring out of the way; the revolution of the machine being completed, a perfectly dressed and jointed stave comes off, of the desired bevel and bilge, of uniform width, according to the thickness of the bolt, at the rate of 80 to 100 per minute, without a hand being touched to it, except to place and secure the bolt of wood upon the feeding-carriage of the machine. The bilge and bevel are easily altered, and the machine accommodates itself to the thickness of the bolt—say from 2½ to 5 inches in width, which are the extremes for a good stave, and cuts both convex and concave surfaces.

The manufacturers have run these machines as fast as 120 revolutions a minute, but we think 80 to 90 revolutions full fast enough, as it accumulates them with sufficient rapidity; and for uniformity and smoothness, they are unsurpassed. No other machine in use for cutting staves feeds itself from a bolt of wood; and it is the only machine that joints the stave at the same time that it is cut and dressed, and without any handling; consequently, only about one third as much room is required as is necessary for other machines to perform the same work. The services of three men, at least, are saved, which services are indispensable where the jointing is a separate operation, thus not only reducing the amount of labor materially, and the space requisite for its performance, but excelling in rapidity, in the economy of timber, and economy of expense in running the machine.

The services of only one man are necessary to place the bolt and attend to the running of the machine. Five horse-power, either water or steam, is sufficient to drive the machine.

This machine can, with ease, cut, dress, and joint as many staves in one day, as one hundred men can set up into barrels in the same time. Any kind of timber that is fit for a stave may be used, even such as could not be rived into staves and worked by hand, such as Maple, Hickory, Hackberry, Elm, Beech, &c., &c. The cost of running the machine, carrying out and piling up staves, need not exceed, if it equals, fifty cents per thousand. One thousand feet of plank, board measure, will turn out three thousand staves. One cord of bolts (128 solid feet) will turn out two thousand staves. It has received the highest awards of the State Agricultural Societies of Ohio, Michigan, and Wisconsin, in the shape of medals, silver cup, premiums, and diploma.

Farmer's Labor-saving Machine.—This is a very simple machine, which is designed to thresh, clean, and bag the various kinds of grain. There are various sizes. That before us is designed for two horses, and it is said will thresh, clean, and bag a hundred bushels of wheat per day.

A Screw Cheese-Press, manufactured at Belleville, N. Y., by Williams & Hackey, stands near that just described, in which the arrangement, in our opinion, is very judicious. A crank, on the axis of which is a small cog-wheel, turns a larger cog-wheel fixed upon the screw, by which the weight is raised or lowered. This must be a very efficient press, and one that will require but little repairs.

McCormick's Reaper.—This machine, which made so much noise at the Exhibition in London, and which has been so extensively advertised, needs no description from us. But we are by no means certain that it is the best in *our* Crystal Palace.

Atkins' Automaton Self-raking and Reaping Machine.—This is so arranged as to be in working order, and as it extends its huge wooden *arm*, with a rake attached, reminds us very much of the movement in Maelzel's Chess-player. It must require considerable power; too much, probably, for our common Northern farmers. Where horse-power is abundant, however, this is of little importance. The action of the machine seems satisfactory.

Denten's Reaper and Self-raker.—The proprietor claims that this cuts a wide swath, and that it can be easily adjusted to any desired height, requiring the attendance of only one person. It is drawn and guided by the tongue. Four horses operate it with ease. The grain, as it is cut, is thrown back on the endless conveyor by the reel, and is carried by the conveyor over the driving-wheel, and thrown into the hopper, which turns at appropriate intervals, and throws the grain in suitable bundles on the ground.

Wagener's Clover and Timothy Seed Harvester.—This machine consists of a simple frame and box mounted on wheels, in front of which is a cylinder, set with spiral knives, acting in concert with curved spring teeth, in combination with a straight knife, which forms a perfect shear, and severs the head from the stalks, which are, at the same time, discharged into the box. The teeth being made to spring and vibrate, it is claimed that not a particle of clover, however stalky or thick, can possibly escape being cut, or allow the teeth to become clogged. This machine is so constructed that it can be made adjustable to the height of the clover and timothy. This is accomplished by a simple lever at the side. This machine is evidently moved by less power than either of those before described. The price, too, is more moderate, being from $75 to $100. A cut of it is here given.

Hathaway's Combined Machine, for threshing, separating, and cleaning grain, clover, and grass seed. It is claimed by the proprietor, that this ma-

chine will thresh and clean from 600 to 800 bushels of wheat per day, and that by changing the position of the concave, it will thresh and clean from 500 to 700 bushels of clover-seed per hour. The machine is not in action.

GILBERT'S THRESHER AND CLEANER, it is said, "will operate as fast as a man can properly feed;" but what rate this is, does not appear; and as it is immovable, (in this exhibition,) we have no means for forming an opinion.

KETCHUM'S PATENT MOWING MACHINE appears as well as any of its rivals, the general arrangement being more efficient, in our view, than that of some of the foregoing. "Still life," however, furnishes very imperfect means of determining the power of the bird in flight.

MANAY'S MOWER AND REAPER.—This, too, looks very well, and we should be glad to see it in action.

PHELPS' PATENT BEE HIVE, described and illustrated in a late number, *in which the bees are at work*, is upon exhibition on an elevated stage in this gallery, and attracts much attention.

INDIA-RUBBER WASHING MACHINE.

THIS is a very good good machine, though very doubtfully named. It can be worked by a man or boy as well as by a woman. The benefit of all machines being to *transfer*, rather than to create power, this meets the demand better than most others which present themselves for the kind regard of housekeepers. The peculiar merit of this patent is, that it both pounds

and rubs, and performs either service upon any particular portion of its contents, as the operator may desire. Its cost is from $12, upwards. A representation of the machine is on the preceding page.

We give more space to this than to almost any machine of moderate pretensions—moderate we mean in the scale of complex mechanisms—because it goes to promote the convenience and comfort of households, to aid the housewife in her numerous and often perplexing arrangements. We have in our minds the little ballad so familiar to all, entitled 'Washing Day.' Who ever makes sunshine then, is a public benefactor.

T. GILBERT'S ÆOLIAN PIANOFORTES.

These instruments, manufactured by the celebrated makers, T. Gilbert & Co., of Boston, are at this time too well known to require particular description.

The experience of eight or nine years has led to several important improvements, and they have now brought the Æolian to a degree of perfection not before attained. Its tones are unlike the seraphine, having all the softness and richness of the flute.

The fact alone of their having applied the Æolian attachment to some 2,000 of their pianos within the last eight years, is a sufficient proof of public appreciation.

The manufacturers use only the metallic frame in their pianos, and from the great care used to obtain only the best of material, confidently warrant them to stand any climate.

Messrs. Gilbert & Co. own the patent, and no other person has the right to manufacture them in the United States.

For particulars, apply to Horace Waters, sole agent, 333 Broadway, New-York.

PAINTING AND PAINTERS.

Painting and Poetry are twin sisters, and from "the beginning," the successful votaries of each have been ranked among the greatest and highest. From statesmen, orators, and even warriors, from the wise and learned, they have received their full share of honor, as well as of popular applause.

As in poetry, so in painting, there is the epic and the pastoral, the sublime and the beautiful, and each of these and of the other descriptions of painting, has its various styles or forms, in which it has expressed its ideas. Without attempting a critical essay on the subject, we have thought it well, especially in connection with The Great Exhibition, to give a short account of the different schools, with the names of a few who have been regarded as the founders and the ornaments of the class.

The Venetian School, in the sixteenth century, dazzled the world by the brilliancy of its coloring. In this branch of the art, the Venetian School surpassed all others. Titian, born 1477; Georgioni, born 1478; Giacomo Robusti, otherwise called Tintoretti, born 1512; and Paul Veronese, born 1530, were leaders among its great names. Georgioni made most important discoveries in the science of rich and natural colors, while Titian, the founder of this school, with his matchless skill, availed himself of those discoveries, to give still greater effect to his own wonderful conceptions and his finished execution. One picture in the Crystal Palace is said to be by Tintoretti.

The Roman School sprung up with Raphael. He was born 1483. He acquired a sublimity of manner that has never been equalled. This school was distinguished for the display of science and skill in its compositions, correctness in drawing, elegance of proportion, and for general beauty and refinement. Julio Romano, Sebastian del Piambo, Polidore de Caravaggio, Carlo Maratti, &c., were of this school, which disappeared with Raphael and his immediate scholars.

The Crystal Palace contains one picture, said to be by Carlo Maratti. It is called *Adoration of the Magi*, and is here numbered 370. He was born 1625.

The Florentine School is remarkable for its boldness and grandeur, and originated with Michael Angelo Buonarotti, of Tuscany, born 1474. He is the Homer of epic painting. Some of his productions are unrivalled in grandeur and sublimity. Among the eminent painters of this school were Leonardo da Vinci, Georgio Vasari, and Daniel Ricciarelli, called also Daniel da Volterra, who was one of the greatest of them all. His "Taking down from the Cross" is ranked with the Transfiguration of Raphael.

The Lombard School, at about the same period, was very distinguished. Antonio de Allegri, called also Correggio, and Francisco Mazzueli, called also Parmegiano, were among the eminent painters of this school. Correggio stands first on the annals of *chiaro-scuro*, "those magic illusions of light and shade," and in all that is elegant and graceful. His Magdalen, 20 inches by 15, was purchased a few years since by the King of Poland, for 27,000 florins, or about $32,500. Of the latter of these it was said, "the soul of Raphael has passed into the person of Parmegiano."

In the Crystal Palace is a small "painting on parchment," numbered 349, said to be by Correggio. It represents the assumption of the Virgin into heaven. The design is admirable, and this at least, if not the painting, is doubtless that of Correggio.

The School of Bologna was a union of different styles, being remarkable for the fine design and drawing of the Roman, the grace of the Lombard, and the coloring of the Venetian. The Caracci, born near the middle of the sixteenth century, Guido Reni, and Domenichino, born 1581, are among its eminent painters. The last named, in color, design, and expression, has been ranked with Raphael. Of the Caracci, Annibal is the most brilliant.

In the Crystal Palace are two pictures which profess to be the work of Guido Reni, one numbered 144, St. Cecilia, and the other, Mary Magdalen, numbered 652. In the choice of his subjects, the purity of his coloring, in sentiment, and an elegance of expression which he has given the female character, and in all the higher excellence of the art, he stands among the highest. Francesco Barbieri was of this school. He was born 1590. One of his pictures is in the Crystal Palace. It is No. 372, and is called Magdalen with Vase.

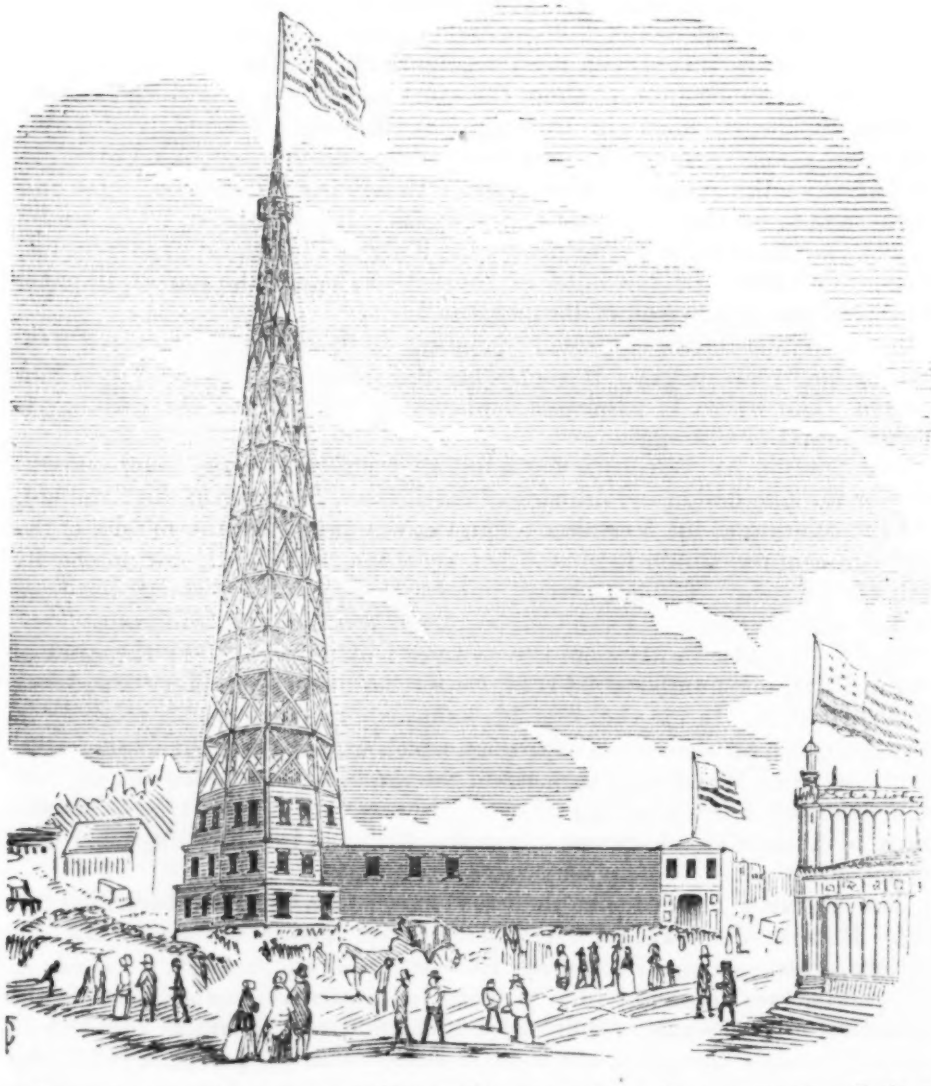
The Flemish School, like that of Venice, is chiefly eminent for its coloring. Rubens, Vandyk, and David Teniers, are among the greatest of this or any other school. Peter Paul Rubens was born in 1577, at Cologne. No painter ever surpassed him in richness of inventive powers, while in the versatility of his genius, facility of combination and beautiful blending of colors, he rivals the great Venetian masters. Vandyk has been called the Raphael of the Flemish school. He was born in 1599. Teniers, born 1610, was eminent for his facility of execution and pureness of coloring. His skies possess that clear and silvery hue, his figures that transparent and spiritual touch, which constitute a great part of the beauty of this master's art

The Crystal Palace contains one picture "by Teniers," the Temptation of St Anthony, numbered 365.

Adrian Van Ostade belonged to this school. He was born 1610. The painting numbered 374 in the Crystal Palace, was by this artist. It is called in the catalogue, "Interior." It is a view of an apartment in some cottage.

We shall take another opportunity to refer to the schools of Naples, Spain France, &c. Among these is the painter Velasquez, of great reputation, one of whose paintings, as it is said, is on exhibition in Broadway. We have neither seen the painting, nor the evidence of its authenticity.

THE LATTING OBSERVATORY.



This structure deserves careful consideration in various respects. It is a capital exhibition of architectural skill, and as such commends itself to the study of all practical artisans in that department. Again, it is worthy of attention as the highest structure, we believe, on the continent; and thirdly,

as an observatory which commands an entire view of New-York and its environs.

The original plan was to construct it 350 feet high to the top of the flag-staff; but it was finally decided to erect it 300 feet to the iron bed on which is being placed the apparatus for the "calcium light," consisting of a lantern of iron, with neat iron palisades around, 10 feet in diameter, the lantern itself being 6 feet in diameter, leaving a two-feet walk at the height of 300 feet from the ground. The lantern reaches 15 feet above the bed-plate on which it rests, and is covered by a well-formed octagonal roof, or cap, diverging from a point at the centre, the entire height of which is 315 feet. This height is within twelve feet of that of St. Paul's Cathedral, measuring to the top of the cross. The height of St. Paul's Cathedral is 306 feet, so that the Latting Observatory is nine feet higher than the loftiest cathedral in Great Britain. It is of an octagonal form, with a base 75 feet in diameter, and it will be capable of accommodating 2,000 persons at one time on its various landings. The frame is composed of eight spars, each made of two posts, an inside and an outside post, the distance from the inside of the former to the outside of the latter being 6 feet. Each outside post is formed of 3 timbers, or planks, 3 inches by 12. These are so bolted together as to hold fast the ends of the short braces which, together with the inside post, form the spar. To see one of these spars separate from the building, would present the appearance of a gigantic ladder, 300 feet high, 6 feet wide, but with the steps placed across, so as to form diamond spaces between each, instead of squares. These spars are made strong by every joint in the timber being covered or lashed over by a strong portion of the neighboring timber—what, in technical language, is called "breaking the joint." Eight of these spars are placed leaning towards each other, forming a base of 75 feet diameter, and a curb at top of 6 feet diameter. These rest on a foundation of solid stone, overlaying the rock 7 feet below the surface. The spars are bolted to the foundation by means of iron strapping, 2 inches by $\frac{3}{4}$ inch, made of the best Ulster iron. This strapping runs from the bottom of the foundation to 14 feet above, where it is firmly bolted to the outside timbers.

These eight spars are supported inside by eight others of similar construction, running perpendicularly to the height of 200 feet, forming a well 15 feet diameter and 200 feet deep, in the centre of the tower. The inside spars are braced and bolted to the outside ones at every stage or landing, (of which there are three above the six floors from the basement,) and also at intermediate stations. In addition to all this, there are braces crossing each other on the outside, with ties, so as to keep the posts from buckling between the landings; and the bolts and ties are so arranged, on the principle of a tube or barrel, that as soon as any variation of climate causes the timber to shrink or to expand, two men can tighten or release the whole more easily than they could the hoops of a large barrel. This is an ingenious contrivance to avoid the danger which a timber building of this character would otherwise be liable to.

Mr. Nangle was the designer of this admirable plan, while Mr. Waring Latting, whose name it bears, originally suggested the idea, and employed Mr. N. to construct the plan. The other gentlemen engaged in it are Messrs. D. D. Deming, Daniel Sickles, and George and Charles P. Grosvenor. The stock of the Association is $150,000. It pays a good dividend.

The ascent is by a winding staircase, but so constructed as to tire, by the ascent, much less than one would anticipate. The frequent landings furnish convenient opportunities for rest, and present sufficient inducements to detain the visitor, even though he may not need the rest.

The entrance to the building is in Forty-second street, and opposite the Crystal Palace.

Among the various objects of interest within the range of vision from this tower, on the south, are New-York city, with its public buildings, spires, and streets. The Sixth Avenue stretches out like a ribbon from beneath you. Brooklyn is also in view, with a small portion of Greenwood Cemetery and Fort Hamilton. East of Brooklyn are Williamsburgh, Greenpoint, Ravenswood, Astoria, Newtown, the spires of Flushing, the tower upon Cypress Hills, &c. The East river is also visible for nearly the whole extent, with Randall's Island, Blackwell's Island, and its Asylum, Alms House, and City Prison.

Turning to the north-east and north, are a continuation of the city, with the Orphan Asylum for colored children, and the Arsenal, a stone building on the Fifth Avenue; the great Croton reservoir, much larger than the receiving basin by the side of the Crystal Palace, and almost under your feet; while still farther in the distance, when clear, you see Harlem village and the High Bridge, on which the Croton pipes cross the Harlem river. This bridge rests on eight arches, each of 80 feet span, and seven others, each being of 50 feet span, and is 114 feet above tide-water. The Palisades on the North river, with the silver surface of this beautiful stream, are also a view.

Again, towards the west, are the Hudson, the beautiful scenery of Hoboken and its "Elysian Fields," Jersey City, &c.

No stranger should visit New-York, and not ascend to the top of the Latting Observatory.

FOR THE PLOUGH, THE LOOM, AND THE ANVIL.

ANALYSIS OF THE VEGETABLE OYSTER.

(TRAGOPOGON PORRIFOLIUS.)

BY J. H. SALSBURY, M. D.

This plant does not belong to the list of those used as food for stock; yet it is a plant of some interest in the way of the table, on account of its richness and peculiar flavor, which somewhat resembles, when cooked, that of the oyster.

The specimens examined were very large and tender. They were furnished by Mr. Douw, of Greenbush. The average widest diameter at the roots of six specimens was 1½ inch; their average length, 11 inches; average length of tops, 26 inches; average weight of each root, 4¼ ounces; average weight of the tops of each plant, 1½ ounce.

	Fresh Roots.	*Fresh Tops.*
Per centage of water, . .	81.220	84.460
" " dry matter, .	18.780	15.540
" " ash, . .	1.465	2.170
" " ash in dry matter,	8.333	13.964

6826 lbs. of fresh roots contain 100 lbs. of inorganic matter; 4608 lbs. of the fresh tops contain 100 lbs. of inorganic matter.

100 lbs. of the inorganic matter of the roots and tops contain, respectively:

	Roots.	*Tops.*
Carbonic acid, . . .	24.60	21.90
Silicic acid, . . .	0.60	8.65
Phosphoric acid, . .	15.60	5.05

Phosphate of iron,	1.85	3.85
Lime,	4.95	7.05
Magnesia,	0.75	1.20
Potash,	5.80	6.30
Soda,	39.20	40.05
Chlorine,	2.45	0.55
Sulphuric acid,	3.90	5.15
Organic matter,	trace	none
	99.70	99.75

100 lbs. of fresh roots remove from the soil a little less than 25 ounces of inorganic matter; 100 lbs. of fresh tops remove about 35 ounces of inorganic matter. These amounts contain, in round numbers, as follows:

	25 ounces.	*35 ounces.*
Carbonic acid,	6.15	7.30
Silicic acid,	0.15	2.88
Phosphoric acid,	3.90	1.68
Phosphate of iron,	0.46	1.28
Lime,	1.24	2.35
Magnesia,	0.19	0.40
Potassa,	1.45	2.10
Soda,	9.80	13.35
Chlorine,	0.61	0.18
Sulphuric acid,	0.98	1.72

It may be regarded by some as quite unnecessary to enter into a series of calculations which show the amount and kind of each ingredient removed from the soil by a given weight of the fresh roots and tops, separately, of the vegetable oyster. Those, however, who live in the vicinity of large towns, and who raise this plant in quantities for market, we think, will find them valuable in the way of pointing out the kind and quantity of each ingredient removed by a crop, and hence, the kind and quantity of each necessary to add. The aggregate quantity raised is, to be sure, but small; nevertheless, it is highly desirable, and equally important, to have what are grown of the best quality. This is only to be effected, to any degree of certainty, by knowing what kind of a soil is best adapted to them. This is established by determining accurately the composition of the plant. Hence the practical value of these calculations.

One ton of fresh roots contains of inorganic matter, 31.16 lbs., which is made up of the following bodies, in the proportions given below:

Carbonic acid,	7.69 lbs.
Silicic "	0.19 "
Phosphoric acid,	4.88 "
Phosphate of iron,	0.57 "
Lime,	1.55 "
Magnesia,	0.24 "
Potassa,	1.81 "
Soda,	12.25 "
Chlorine,	0.76 "
Sulphuric acid,	1.22 "

These bodies are more than furnished to the soil by the following compost:

Ashes,	33 lbs.
Common salt,	10 "
Plaster,	5 "
Barn-yard manure,	1 ton.

The ashes furnish all the inorganic matter removed, in sufficient quantity, except the soda, chlorine, and sulphuric acid. The salt and plaster furnish these. The ton of barn-yard manure is added to furnish organic matter to the plant, to increase the absorbing power of the soil, to elevate its temperature, and to render more soluble the inorganic matter added.

We now come to see the proximate organic composition of the roots, which points out to us their nutritive qualities.

	100 *parts of fresh roots.*	100 *parts of dry roots.*
Water,	80.610	
Fibre,	2.764	29.618
Sugar and Extract,	3.665	39,279
Dextrine,	1.435	15.378
Casein,	0.172	1.849
Albumen,	1.066	11.426
Starch,	0.035	0.375
Resin,	0.180	1.929
Gluten,	0.014	0.147
	99.941	100.

The roots contain a large per centage of sugar, dextrine, and albumen, which accounts for their rich flavor. They contain about 5 per cent. of water more than the potato. Besides the above-mentioned bodies, they have a small quantity of a principle which gives them that peculiar flavor and odor when cooked.

Ultimate organic analysis of roots.—100 parts of dry roots gave of

Nitrogen,	1.980
Carbon,	42.809
Oxygen,	41.014
Hydrogen,	5.644

ATMOSPHERIC GAS-LIGHT.

Some months ago, a patent was secured for a new gas-light, the basis of which is humid atmospheric air, and a company is now organized for bringing it before the public. Henceforth, there is no necessity for huge retorts, stills, furnaces, &c., covering with a sooty cloud entire sections of the city; for each family and each individual even, is independent of any such assistance in illuminating his mansion, church, store, or counting-room. The point, which has so long been contested, is settled beyond controversy.

We have been personally conversant with this discovery from its earliest history, and we have long been certain, from the evidence of our own senses, of the truth of its pretensions. For many months we have had a two-ounce phial, containing the mysterious liquid, so arranged as to allow a passage of air into and out of it, and using our own lungs as the only machinery in connection with it, have exhibited, from time to time, to scores of our friends,

its product, in the form of a clear, white, pure flame, free from smoke and other offensive or unhealthy quality, and which threw into shade all other lights with which it could be conveniently compared. We have used this same phial, *its contents being unchanged*, for more than a year, and are ready to show it to still other friends.

But what is it? How does it differ from other gas-lights, already in use?

It is produced by a current of "humid air," passing through a mixture, the principal ingredient of which is benzole, a highly carbonized fluid. Instead of using "carburetted hydrogen," prepared by expensive chemical processes, (which, being always impure, and abounding in sulphuretted hydrogen, has a most offensive smell, as every one knows who has been near a leaky gas-pipe, and is very unhealthy withal,) this patent employs atmospheric air, which, by a mere passage through the liquid, at ordinary temperatures, appropriates to itself, from the benzole mixture, all that is requisite to impart to its flame peculiar brilliancy.

But what is benzole, and how and at what cost can it be obtained?

Benzole is a "hydrocarbon" spirit, of liquid form, obtained by distillation from bituminous coal and other analogous substances, which are found or are easily obtained in every part of the world. The company to which we shall presently refer, propose to supply it, at present, in any quantities, by importation, at one dollar a gallon. But they purpose, hereafter, to manufacture it for themselves, and can then, no doubt, afford to sell it at a much lower rate.

This benzole is mixed with one or two other cheap ingredients, and a gallon of the hydrocarbon is fully equal to the production of 1,000 cubic feet of gas.

Hence, the gas cannot cost the consumer more than $1.25 per 1,000 feet, and probably it will be much less. But even at this rate, this gas is essentially cheaper than that sold by any company, in any city in the world.

In the use of this gas, there need be no middleman or company between the raw material and the consumer. No chemical apparatus nor chemical process is necessary to prepare the benzole for immediate use.

Every building, whether factory, store, dwelling-house, church, or other structure, and even a single room in a boarding-house, whether in city or country, may have its own fixtures for using this light. To provide an entire dwelling-house of ordinary size and requirements, would need but a comparatively cheap apparatus. The Company now organized propose to furnish every thing that is necessary, not occupying more space than two feet square and three feet high, at a cost not exceeding $70. This apparatus will require less than two minutes' attention, daily, to keep it in constant working order for an entire household. The pipes conveying the gas to the different parts of the house, as at present, would be arranged, of course, at more or less cost, according to the pleasure of each consumer. It will not be long, in our opinion, before ingenious mechanics will devise models for ladies' work-tables, or other household furniture, which will contain all that is necessary to furnish light to as many as can be accommodated around it.

The proprietors of this patent have already organized a company, under the name of The American Gas Company, the stock of which includes the two great States of New-York and Pennsylvania, and a good portion of which, as we are informed, is already sold. Their office is at No. 3 Broadway, where the proprietors of most of the other States may also be found. The shares are held at a low price, so as to bring them within the reach of those of moderate means.

We shall be happy to give any further information in our power to any of

our readers who may send us letters of inquiry. For, though not interested in this patent to the amount of a single mill, we have felt a deep interest in the subject, and we believe this discovery will revolutionize, ere long, our whole system of lumination, and we are disposed to give it all the aid in our power.

Such is the obvious value of this discovery, that more than one who have been to some extent made acquainted with it, either by fair means or foul, have undertaken to avail themselves of the opportunity to secure a fortune, by adopting modified forms of the great principles involved in it, and already secured to the gentlemen who have organized this Company, by patent.

We purpose to illucidate this subject more particularly in our next number.

EDITORS' JOTTINGS AND MECHANICAL RECORD

NEW-HAVEN RAILROAD.—We take pleasure in recurring to this excellent inland route for eastern travel, as affording superior facilities and advantages to any who may have occasion to avail themselves of good accommodations, gentlemanly conductors, and careful engineers and attendants. Every attention is paid to the comfort and safety of passengers, and we are pleased to know that this is a favorite line of travel with the public generally. Under the present able management of this Company, we have no doubt of its continued success and prosperity.

OTIS & COTTLE'S BORING AND MORTISING MACHINE.—We are gratified at the success of the Boring and Mortising Machine manufactured by Messrs. Otis & Cottle, and on exhibition at the late Fair of the American Institute, and also at the Crystal Palace. Besides the above mortising and boring machine, Messrs. Otis & Cottle sell every variety of machinery for carpenters, joiners, and builders. Office, Syracuse, N. Y.

BOSTON MUSEUM.—Being in the "city of notions" a few days since, we "dropped in" to the Museum, and were so much interested that we staid until after the performance in the evening. The collection of natural and artificial curiosities is very large, and the performances very respectable.

SAFES.—We have seen McFarland's Fire and Burglar-proof Safe that delivered up its contents sound and uninjured from the great fire in Pearl street, August 23, and do not hesitate to say to our patrons, that whatever will stand a fire like that, may be trusted anywhere. The manufacturers are confident of its superiority over all others, and modestly wait for time and fires to bring out the proofs. They are pressed with orders from all quarters.

CHILSON'S PATENT AIR-WARMING AND VENTILATING FURNACES.—The importance of pure air for respiration cannot be overrated. Every individual is interested to a greater or less extent in the successful accomplishment of this object. But to impart a general and agreeable warmth to the atmosphere in dwelling-houses, our school-houses, churches, &c., during the severe cold of our Northern winters, and yet to retain it in a pure state, is a problem requiring mechanical ingenuity and chemical science. Notwithstanding such difficulties, presenting objections to so many of the various kinds of warming apparatus now in use, Mr. Gardner Chilson, of Boston, after many years' close observation and strict practical experience, has produced, as the result of his study and experiments, a combination hot-air and ventilating furnace, that we think is unsurpassed either in the simplicity of its construction, the excellence of its arrangement, or the pleasantness and healthiness of the warmth produced by it. This arrangement not only answers the purposes above described, but promotes economy in the quantity of fuel consumed, and is free from danger by fire.

Baltimore and Ohio Railroad.—This road was opened to through travel on the 1st of January, 1853, and is now become thoroughly settled and complete in all its appointments. It is 380 miles in length, and passes through a highly interesting and attractive country. Among the Alleghanies, the scenery is remarkably sublime. There are *no draw-br.dges* upon the line, and the safety and comfort of the passengers are carefully provided for by competent and attentive officers.

Stone Tree.—There is a tree in Mexico called the *chijol*, a very fine wood, which, according to a writer in the *National Intelligencer*, (W. D. Porter,) becomes petrified after being cut, in a very few years, whether left in the open air or buried. From this timber, houses could be built, that would in a few years become fire-proof, and last as long as those built of stone. The wood, in its green state, is easily worked: it is used in building wharves, forts, &c., and would be very good as railway sleepers, or for plank-road stringers.—*The Pacific*, (*San Francisco Paper.*)

NEW BOOKS.

The Missionary of Kilmany; being a memoir of Alexander Paterson, with notices of Robt. Edie. By Rev. John Baillie. pp. 253. New-York: Robert Carter & Bros.

This little work was undertaken at the instance of Rev. Dr. Hanna and other prominent persons, who were anxious that the life of so useful a man should not pass unrecorded. It will be read with interest and profit. It is very handsomely printed, and in handsome covers.

Christian Progress; a sequel to The Anxious Inquirer after Salvation directed and encouraged. By John Angell James. pp. 180. New-York: Robert Carter & Brothers.

The works of John Angell James need no endorser. This small volume should be a companion to the other writings of the most excellent and able author.

The Law and the Testimony. By the Author of the "Wide, Wide World." New-York: Robert Carter & Brothers, 285 Broadway.

Our readers will not be able to appreciate this work but by reading it. It is a collection or classification of the mass of Scripture testimony, on each of the grand points of Scripture doctrines. The second article, upon the Divinity of the Saviour, is written with the tact and power of a theologian, clear and cogent.

Principles of Geology; or, the Modern Changes of the Earth and its Inhabitants, considered as illustrative of Geology. By Charles Lyell, M.A., F.R.S., Vice-President of the Geological Society of London; Author of "A Manual of Elementary Geology," "Travels in North America," "A Second Visit to the United States," &c., &c. New and entirely revised edition, illustrated with maps, plates, and wood-cuts. New-York: D. Appleton & Company, 200 Broadway. 1853.

This work of more than 800 pages is now offered, after being revised and enlarged by nearly one third of the whole, for the price of $2.25 per volume. It comprises a historical sketch of geology, defining its relation to other sciences; treats of observed changes in the inorganic world now in progress; of igneous causes or subterranean heat; of the geographical distribution of species, and theories respecting their creation and extinction, and the laws by or according to which we find them imbedded in volcanic, fresh water, and marine deposits.

It is indeed just the book that we are glad to meet with, coming down to our own time, full of instruction to the student, and matter for contemplation for the most profound. A book for all, and its price within their means.

List of Patents Recently Issued,

FROM SEPT. 7 TO OCT. 1.

M. W. Baldwin, of Philadelphia, Pa., for improvement in gear of variable cut-off valves for steam-engines.

John Chilcott & Robert Snell, of Brooklyn, N. Y., for improvement in India-rubber soles for boots and shoes.

John Chilcott & Robert Snell, of Brooklyn, N. Y., for improvement in cutting boots and shoes. Patented in Belgium, Sept. 16, 1852; in France, Sept. 17, 1852; in England, Sept. 30, 1852.

Pierre Demeure & Auguste Mauritz, of New-York city, N. Y., for improvement in bed bottoms.

Wm. P. Greenleaf, of Washington, N. H., for improvement in shape of scythes.

Z. H. Mann, of Cincinnati, Ohio, for improvement in safety-valves for steam-boilers.

George Potts, of Cincinnati, Ohio, for improvement in revolving mandrel for lining cylinders with metal.

Andrew Robeson, Jr., of Newport, R. I., for improvement in bucking cloth. Patented in England, Nov. 8, 1853.

Hervey S. Ross, of Cleveland, Ohio, for improvement in fences.

Samuel B. Sumner, of Grantville, Mass., for improvement in boot-jacks.

Frederick W. Norton, of Lasswade, Great Britain, for improvement in the manufacture of plain and figured fabrics.

James Rakin, of Detroit, Mich., for improvement in hanging mill saws.

John Chilcott & Robert Snell, of Brooklyn, N. Y., for improvement in screw fastenings for boots and shoes.

L. A. Stockwell, of Batavia, N. Y., for improvement in lard lamps.

T. J. Alexander, of Westerville, Ohio, for improvement in sawing sticks for broom-handles.

Jas. Black, of Philadelphia, Pa., for improvement in planetary hydraulic steam engine.

Uriah A. Boyden, of Boston, Mass., for improvement in turbines.

Uriah A. Boyden, of Boston, Mass., for improvement in hydraulic motors.

Alfred F. Chatman, New-York city, N. Y., for improvement in razor strops.

Isaac Fay, of Cambridge, Mass., for improvement in railroad car-seats.

David Freed, of Huntingdon, Pa., for improvement in toilet furniture.

Samuel Hulbert, of Ogdensburgh, N. Y., for improvement in ploughs. Patented in Canada, Sept. 20, 1852.

Samuel Jenkins, of Portsmouth, Pa., for improvement in seed-planters.

Oliver S. Leavitt, of Marcellus, N. Y., for improvement in hemp breakers.

Oliver S. Leavitt, of Marcellus, N. Y., for improvement in drawing-frames for hemp and flax.

Warren Lyon, of New-York city, N. Y., for improvement in metal drills.

James R. Nichols, of Haverhill, Mass., for improvement in fluid cans.

Henry Perrin and Wm. Rudduck, of Wilmington, Ohio, for improvement in seed planters.

Philo Sylla and Augustus Adams, of Elgin, Ill., for improvement in grain and grass harvesters.

Ancil Stickney, of Norwich, Vt., for improvement in blow-pipes for enlarging blasting cavities. Ante-dated May 10, 1853.

Ancil Stickney, of Norwich, Vt., for improvement in compound blow-pipe for enlarging blasting cavities. Ante-dated June 11, 1853.

Abel Shawk, of Cincinnati, Ohio, for improvement in steam generators.

O. Willis, of McDowell Co., N. C., for improvement in saw for water wheels.

George Gorman, of Lamar, Mass., for improvement in cotton stalk-cutters, or pulverizers.

Halvor Halvorson, of Hartford, Conn., for improvement in looms for weaving hair cloth.

Henry Hockstrasser, of Philadelphia, Pa., for improved sash-fastener.

Nicholas Mason, of Roxbury, Mass., for improvement in cooking ranges.

Henry McCarty, of Pittsburgh, Pa., for improvement in the manufacture of sheet-iron.

Jordon L. Mott, of New-York, N. Y., for improvement in cooking-stoves.

Jordon L. Mott, of New-York, N. Y., for improvement in bathing-tubs.

Christian Sleppy, of Newport, Pa., for improvement in making chains.

David Stuart, of Philadelphia, Pa., for improvement in annealing hollow iron ware.

Robert Waskey, of Mill Creek, Va., for improvement in smut machines.

Wm. Zimmerman, of Quincy, Ill., for improvement in smut machines.

Chas. E. John and Samuel Wethered, of Baltimore, Md., for improvements in the use of steam for actuating engines. Patented in England, May 25, 1853.

Wm. Brown, of Glasgow, Scotland, for improvement in preparing paraffine oil.

Caleb B. Burnap, of Hartford, Conn., assignor to Lucius F. Robinson, of same place, for improved method of veneering.

Daniel P. Fales, of West Poultney, Vt., for improvement in car wheels.

James M. Dick, of Buffalo, N. Y., for improvement in railroad switches.

Chas. H. Platt, of New-York, N. Y., for improvement in ships' blocks.

Wm. Richardson, of New-Orleans, La., for improved centrifugal draining machine.

Stephen E. Parrish, of New-York, N. Y., for improved clamp for laying floors.

THE GREAT

Piano and Music Establishment.

HORACE WATERS, 333 Broadway.

THE BEST PIANOS IN THE WORLD.

T. Gilbert & Co.'s celebrated Pianos, with Iron Frames and Circular Scales, are acknowledged by artists and the public to be the best. Their beauty of tone and solidity of construction have long stamped them as the "*ne plus ultra Pianos.*"

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THE ÆOLIAN PATENT.

T. Gilbert & Co. are the owners of this much-admired Patent, which gives to the Piano the beautiful tones of the Organ, Harp, and Flute. It is needless to add that, being the owners, they can supply the public with Æolian Pianos at prices less than any other house.

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GILBERT'S BOUDOIR PIANOS.

These Pianos are admirably adapted for small rooms, and are acknowledged by the public to be equal, if not superior, to Collard & Collard's Boudoirs (of London), which have hitherto carried the palm.

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SECOND-HAND PIANOS,

Nearly equal to new, from the best manufactories, at great bargains, from $40 to $150.

MELODEONS.

S. D. & H. W. Smith's celebrated Melodeons are tuned in the equal temperament, the harmony being as good in the remote keys as it is in the common—the only Melodeons so tuned, and unquestionably the best (in corroboration of which statement please see *N. Y. Musical Review* for October). HORACE WATERS, *Sole Agent.*

Martin's Guitars, and all kinds of Musical Instruments.

New Music for November,

BY THE FOLLOWING EMINENT COMPOSERS:

SONGS.

Thomas Baker—"Guardian Spirits," (Words by James Simmonds)..... 25 cents.
" "Give me a Kiss," " " ..... 25 "
" "The Hungarian's Lament," " ..... 25 "
(As sung by Mdlle. Zerr at Jullien's Concerts.) Three beautiful songs, both words and melody.
L. B. Woodbury—This beautiful composer has composed three exquisite songs:
" "We are Happy now, dear Mother."..... 25 "
" "Row the Boat,"..... 25 "
" "Katy's Cry."..... 25 "
The profits of this last song are given to the Five Points House of Industry.
THE GREAT SONG OF THE DAY—"Little Katy, or Hot Corn," by J. Simmonds. This song, from the first day of publication, has been a general favorite. 4,000 copies sold in four weeks..... 25 "
THE LAST NEW SONG—"The Dying Words of Little Katy; or, Will he Come?" with a beautiful Vignette. Written by Solon Robinson, the author of the original story in the *Tribune*. Music by Horace Waters, arranged by Thomas Baker..... 38 "
The Great National Song—"Ingraham." Written and composed by A. Sedgwick..... 25 "

Piano Music.

John Pychowski's last composition—"Remembrance of Home,"..... 38 "
Oscar Comettant's " "Gabrielle,"..... 38 "
Jullien's "Prima Donna Valse," (the best arrangement)..... 50 "
T. Franklin Bassford's "Lilly Dale," with variations..... 50 "
A. Sedgwick's "Little Katy, or Hot Corn Quick-Step,"..... 25 "
Thomas Baker's "The New Hungarian Polka,"..... 25 "
" "Captain Charlotte Polka," with a beautiful Vignette..... 50 "
The above are all beautiful compositions. New Music published daily.

HORACE WATERS,

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N.B.—Seminaries supplied on the most liberal terms, and a fair exchange with the Trade throughout the United States.

MUMMA'S

PATENT CORN SHELLER!

PATENTED JUNE 12, 1849.

This Sheller is pronounced by competent judges to be superior to all others, as it is quite simple and durable in its construction, and shells the ear *perfectly clean* from end to end, with great rapidity and ease. It separates the cob from the corn, and is adapted to either hand or horse power, and capable of shelling from 30 to 40 bushels per hour. It has shelled a bushel in a minute by hand power. It runs as light, with one man to turn, as the common hand shellers. From the peculiar construction of the cylinder and springs, it will shell *large* and *small* ears perfectly clean at the same moment, of either new or old corn, an advantage not possessed by the multitude of Shellers in general use. With a very slight alteration it can easily be converted into an excellent Apple or Root Grinder.

This Machine has met with the universal approbation of all classes of men wherever introduced. It was awarded the *first premium*, a heavy SILVER MEDAL, at the Great Fair of the Maryland Institute, held in Baltimore October, 185 .

It also received the *highest premium* which was awarded at the great Agricultural State Fair of Pennsylvania, held at Harrisburg, October, 18 1. Also at the State Fair of Kentucky in 1852.

The Subscriber having purchased the Patent Right of the above Sheller for all the *United States* and *Territories*, will sell Township, County or State rights, on reasonable terms.

E. ROBINSON.

Nov., '53, 12m. Greencastle, Franklin Co., Pa., Aug., 1853

BRIGGS & VICKERE,

MANUFACTURERS OF

PLAIN ORNAMENTAL AND ENAMELLED CHAMBER FURNITURE

WHOLESALE AND RETAIL,

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In offering, for the patronage of the public, goods of our own make, we feel confident of that success which industry in business and an honesty of purpose, that offers only good and warrantable articles, always merits, simply asking of all who wish to purchase to call and judge for themselves.

GEORGE BRIGGS
WM. VICKERE.

N B Dealers supplied on liberal terms, and orders promptly attended to.

Nov., 3, 1y

PREPARED SUPER PHOSPHATE OF LIME,

BY THE UNION CHEMICAL WORKS, L. I.

HOYT & CO., AGENTS,

Nos. 234 Water Street, and 122 West Street, Corner of Dey St., New-York

A FERTILIZER of the most approved quality, producing all the immediate effect of the best Peruvian Guano, with the advantage of being much more lasting in the soil. Thoroughly tested, and found to more than realize the expectations of all those who have already tried it. The best evidence of this is the largely increased demand this season over the past year. Put up in bags of 100 lbs; barrels 250 lbs. each. Buyers will please be particular to observe our brand upon each bag or barrel.

Also for sale, American and Foreign Field and Garden Seeds, English Ray Grass, Foul Meadow Grass, fine mixed Lawn Grass, White Clover, Osage, Orange, &c.

Nov., '53, 1 y.

IRON BEDSTEADS.

COMSTOCK, BROMLEY & CO.,

ATLANTIC FOUNDRY, SOUTH BROOKLYN,

Manufacture every description of Plain and Ornamental Iron Bedsteads, with particular regard to style material and workmanship

Sales Room No. 95 Leonard St., New-York,

ONE DOOR WEST OF BROADWAY.

FOLDING BEDSTEADS OF ALL KINDS.

Hotel, Hospital, Prison, Family, Servants' and Children's Bedsteads always on hand. Also a general assortment of Iron Furniture.

☞ These Bedsteads are superior to all other in point of cleanliness, neatness and economy. They are always free from vermin, and are exceedingly durable, portable and convenient. Orders to any extent may be addressed to

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COMMISSION MERCHANTS

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MACHINIST'S TOOLS, LEATHER BELTING, &C.; BROKERS IN DYE-WOODS, DYE-STUFFS AND OILS. ALSO, IMPORTERS AND DEALERS IN EVERY VARIETY OF

MANUFACTURERS' ARTICLES.

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THE NEW-YORK JOURNEYMEN

SCALE MAKER'S Co.

MANUFACTURE EVERY DESCRIPTION OF

Railroad, Warehouse, Hay, Floor, and Portable Platform, Bank, Gold and Counter

SCALES, PATENT BALANCES, &c.

WEIGHTS GRADUATED TO FOREIGN STANDARDS.

Every Scale made by them is correct, and warranted not liable to get out of order.

WAREHOUSE, 216 Pearl-St.

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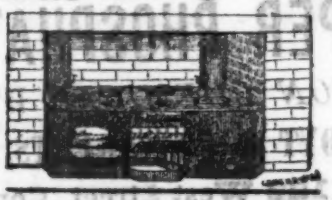
Where every description of Scales may be obtained, and all orders promptly attended to.

☞ **REPAIRING DONE AT SHORT NOTICE.**

. '53. tf. **J. BRYDEN, J. ROBIDOUX.**

THE LADIES' FRIEND.

115 BLEECKER ST. New-York,



One Door from Wooster St.

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his is the best Range in use for baking and boiling, and it works with half the fuel that others use. A great antage is gained by passing the draft direct from the fire to the bottom of the oven, and by having an air mber on the syphon principle between the fire and the oven, which so regulates the heat that it bakes on ides alike. This Range is heavier than any other of its size, of extra material, and sold only by the manurer. 115 BLEECKER STREET, N. Y. F. S. MERRITT.

t. '53. 1 year.

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ale of Mechanical and Agricultural Machinery,

IN THE WESTERN AND SOUTH-WESTERN STATES.

And such other Patented Articles

As are suited to the wants of the Mississippi Valley.

A business residence of sixteen years in the WESTERN STATES, a very extended acquaintance in all of the ipal Western Cities, with the assistance of TRAVELING AGENTS, will offer to Eastern Manufacturers and ntees unusual facilities through this Agency.

TO FLAX GROWERS.

The subscriber has invented, and builds to order a

FLAX MACHINE,

hich, attended by two hands, is guaranteed to dress from ree hundred to four hundred and fifty pounds of Flax per y. The saving in labor and tow, by comparison, is considered ivalent to the cost of dressing flax by the best common achinery used in this country and Europe. The new machine made with care to secure strength and durability, and can be n at a speed which requires more than two hands to attend Unrotted flax straw can be dressed by it. It can be driven by horse power, or otherwise, and, being portable, can be sent any distance.

For the present, the price is $400. Those who wish to obtain it in season to begin operations next Autumn, will do well to apply soon.

S. A. CLEMENS,
SPRINGFIELD, MASS.

Aug. 10, 1853. t.f.

SUPER-PHOSPHATE.

No expense has been spared in the combination of this most filling manure, which contains the nutritive properties of all nts. It is superior to most of the articles offered for sale der the same name, and is inferior to none; although sold at much lower price. It is put up in bags at $40 per ton of 0 lbs., cash.

Office of the New-York SUPER-PHOSPHATE Manufacturing Company,

159 WEST STREET, N.Y.
VICTOR R. KNOWLES, Agent

Sept. 1, 1853.—3t. 2507.

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AGRICULTURAL AND HORTICULTURAL

IMPLEMENT AND SEED WAREHOUSE.

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THE SUBSCRIBER OFFERS FOR SALE AN EXTENSIVE ASSORTMENT OF

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HORTICULTURAL TOOLS.

GARDEN, GRASS, FIELD AND FLOWER SEEDS.

AGRICULTURAL AND HORTICULTURAL.

RURAL AND BOTANICAL PUBLICATIONS.

Implement and Seed Catalogues, Landreth's Rural Register and Almanac, furnished gratis on personal or pre-paid application.

Oct. '53, 3m. 2572.

D. LANDRETH, Philadelphia.

George W. Putnam's

PATENT

AWL-FILING MACHINE.

Subscriber [sole proprietor of the above Patent] keeps much better, at a great saving of files and saws. Lumbermen ues constantly on hand at Glenn's Falls, Warren Co., N. Y. will find it to their interest to have one of these machines upon ship to order, to any part of the United States. Putnam's their mills Terms for a single Machine, with right of use, ne, attended by one man, will file more saws in a given Seventy-five Dollars.
than three men by hand in the old way, and do the work July 17, 1852. ALBERT H. CHENEY.

Dry Goods Baling Presses.

LLOCK'S Patent, a powerful, light, handy article, suitable for factories and jobbing stores, for sale low. Apply at the office of the American Artisan, or to the Patentee,

ov.'53tf. S. W. BULLOCK, 208 Broadway.

Quartz Crushing Machinery.

ARTZ CRUSHING MACHINERY of the very best kind ever introduced to the notice of the public, can be seen on application to the subscriber, where all information upon the subject will be given.

ov.'53tf. S. W. BULLOCK, 208 Broadwyy.

NEW IMPROVEMENT
IN
PLANING MACHINES.

HAVING received letters patent for my New Improved Planing Machine for planing boards and planks, I now offer for sale Machines and Rights for States, Counties, or Cities. My Improved Machine is unlike all others in its operation, and it will produce more work and of better quality than any others now in use. The principles of its operation are simple, as there are no gear or belts in or about the machine, these being all placed beneath the floor. The amount of work done is only limited by the number of persons feeding the machine. A matching apparatus works in connection with this machine, by which the Boards are planed and matched in the same operation. The planing and matching are superior to that produced by the hand plane; and both sides of the board are planed at the same time if desired.

One of these machines will be in full operation at the Machine Shop and Foundry of Messrs. F. & T. Townsend in this city by the 1st of June next, where it can be seen.

GEORGE W. BEARDSLEE.
Residence 764 Broadway, Albany.

June 5th.

A. HALL'S
Fire-Brick Works,
PERTH AMBOY, N. J.

A LARGE stock of the best No. 1 Fire Brick constantly on hand. Vessels of any draft can load at any stage of the tide and season of the year.

SHAPES.—Large and small Bull-Heads, in walls, from 5 feet to 8½ feet circle; Wedges, Split Brick, Soaps, Cupola, for any circle, from 18 inches to 30 inches constantly on hand.

KAOLIN of the best quality.

ONE MILLION Bricks can be made at this factory in six months and none are made from October to April. All orders for the usual shapes should be given in the Spring, as bricks are best and made much *cheaper* in the *summer months*. Vessels loaded with dispatch. Orders promptly executed. Mar. 3, 1852.

A. W. CARY'S ROTARY FIRE-ENGINE PUMPS.

THE Inventor, after thoroughly testing this engine pump, for the past two years, feels confident that it is not equalled by any thing now in market, in the way of raising or forcing water, the motion being rotary, the stream is constant, without the aid of an AIR vessel. The packing is self-adjusting, very durable and cannot well get out of order.

These pumps are well calculated for all the purposes for which pumps or hydrants may be used, viz., Factories, Steamboats, Tanneries, Breweries, Distilleries, Railroads, Water Stations, Hotels, Mines, Garden Engines, &c.

Among the many testimonials given of this pump, is a gold medal awarded at the last great Fair of the American Institute.

No. 1 is a house or well pump and domestic Fire Engine, and will raise from 20 to 30 gallons per minute.

No. 2 will raise 100 gallons at 120 revolutions.
No 2½ " 200 " 120 "
No. 3 " 300 " 120 "

The quantity raised can be doubled, by doubling the revolutions. These machines are manufactured and sold by the subscribers at Brockport, N. Y., also in this city, 48 Courtland street (corner of Greenwich,) by J. C. CARY.

Sept. 18–1y. CARY & BRAINERD.

PATENTS, INVENTIONS, &c.

J. H. BAILEY, Agent for the procuring and sale of Patent Rights for this country, Great Britain and the Continent.

MECHANICAL DRAWINGS.

Mechanical and Architectural Drawings executed in all kinds of Perspective, with dispatch and at moderate prices. Office, Tryon Row, No. 5, opposite City Hall. May 29—tf

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HOWLAND, WOOD, ENGRAVER, 128 NASSAU ST. N.Y.

BRIDGEWATER PAINT,
MANUFACTURED BY THE
BRIDGEWATER PAINT MANUFACTURING CO.
NEW-JERSEY.

THE Company have now on hand a supply of this paint, which they offer to the public as the best article known for roofs and outside work on houses, or for brick and wood work generally. They can confidently recommend it as the most perfect protection from sparks and cinders, and therefore admirably adapted for decks of steamers, rail-road cars buildings and bridges, tow-boats, &c. It renders any thing upon which it is used perfectly water tight, and must therefore come into general use as a covering at all exposed to the rain. The strongest testimonials of the virtues of this article from officers of the army, superintendents of rail-roads, Insurance Companies, captains of vessels, painters, &c., may be seen, together with specimens on tin, wood, canvass, &c., at the depot of the Company. For sale, dry in packages of 200 lbs. and upwards and in kegs of 25, 50, and 100 lbs., by

Feb, 1852.

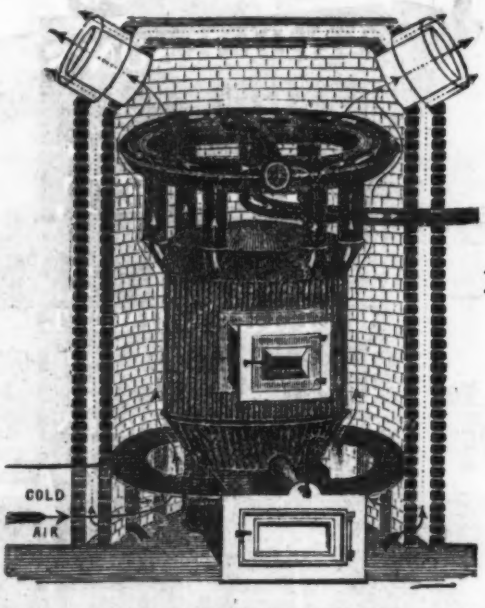
R. BOGERT, General Agent,
125 PEARL AND 78 BEAVER STREET.

CHILSON, RICHARDSON & CO.,

374

BROADWAY,

NEW YORK.



101 & 103

BLACKSTONE ST.,

BOSTON.

AIR WARMING AND VENTILATING WAREHOUSES.

CHILSON'S WORLD'S FAIR PRIZE MEDAL FURNACE, as recently improved and patented, is adapted to all classes of public and private buildings.

After having been subjected for the past five years to the most severe practical tests, this Furnace is now most favorably known, and extensively used throughout the **United States and Canada.** It possesses advantages worthy the attention of those in want of a **FIRST-CLASS VENTILATING FURNACE;** is a powerful heater, very durable, not liable to repairs, economical in the use of fuel, equally adapted for Anthracite, Bituminous **Coal or Wood,** and is **particularly approved** for the quality of the warm air obtained—**special provision** being made for the supply of a large amount of **moderately warmed pure air, entirely free from the effect of contact with red-hot iron.**

Also, five sizes of an **IMPROVED PORTABLE FURNACE,** superior to any thing of the kind ever before offered—simple in its construction, compact in form, efficient in operation, and easily managed. Being entirely of cast iron (the pot lined with heavy soap-stone), is perfectly durable, and **not liable** to the **escape** of **gases and smoke,** which has ever been the objection to ordinary portable furnaces.

Four sizes of **Dr. CLARK'S VENTILATING SCHOOL STOVES,** particularly commended to the attention of School Committees, and others in want of apparatus for thoroughly and properly **warming and ventilating school-rooms and halls.**

EMERSON'S PATENT VENTILATORS of all sizes, and ventilating apparatus in every variety. A complete assortment of Iron, Bronzed, Plated, and Enameled Registers, and Hot Air Grates.

Manufacturers of **THE METROPOLITAN COOKING RANGE,** a new and superior article, embracing all the modern improvements, combining **beauty, utility, durability,** and **economy,** with **perfect efficiency in operation.**

EVERY RANGE WARRANTED.

AGENTS FOR THE

Mirror Marble and New York Marbled Iron Mantles

AND OTHER WARES.

References to parties having our apparatus in use in all parts of the country, with explicit directions for setting the furnaces, and all information necessary for properly warming and ventilating public and private buildings, may be gratuitously obtained by application to either of our warehouses.

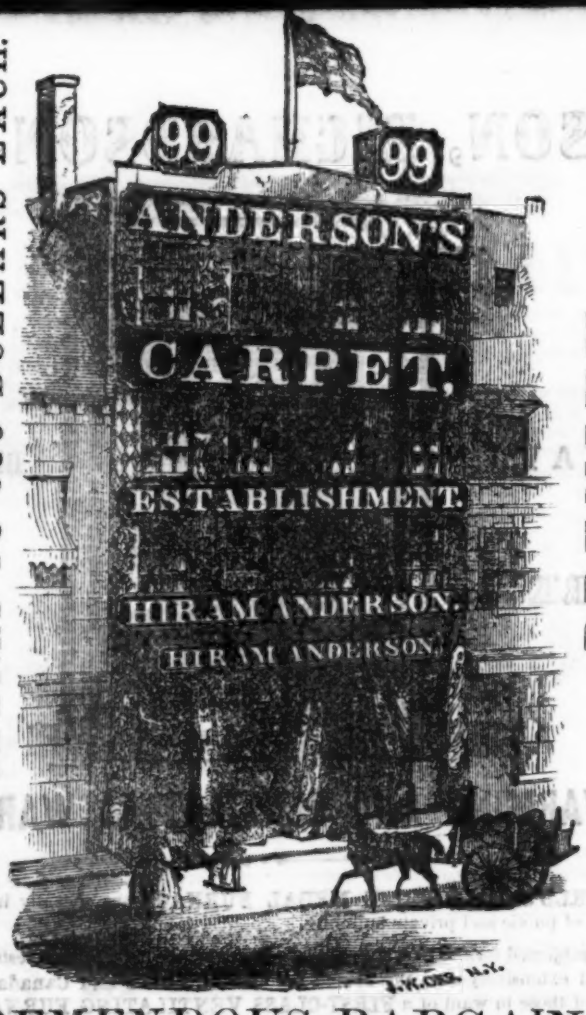
TURKEY, AXMINISTER,

AUBUSSON, PERSIA, AND MOSAIC CARPE

ONE ENTIRE PIECE,

FROM

350 DOLLARS TO 600 DOLLARS EACH.



PREMIUM

MOSAIC LANDSCAPES

RUGS, SCREENS,

TABLE AND PIANO COVERS.

TREMENDOUS BARGAINS

AT THE CELEBRATED LARGEST AND CHEAPEST

Carpet Establishment in the United States,

No. 99 BOWERY.

HIRAM ANDERSON,

EIGHT SPACIOUS SALES ROOMS, WHOLSALE AND RETAIL.

SALES ROOM No. 1, contains the most extensive fashionable, and handsome assortment of Hare's celebrated English and American

FLOOR OIL CLOTHS,

of the newest style, satin finish Marble, Italian, Fresco and Scroll Paintings, ever offered in the city, from 2s. 6d. to $1 the square yard, of 1 to 8 yards wide.

SALES ROOM No. 2.—There are two hundred and fifty pieces of the choicest, most durable and desirable patterns of English and American

INGRAIN CARPETING,

at unparalleled low prices from 5s. to 6s. 6d. per yard. Manufactured for our city sales.

SALES ROOM No. 3, contains three hundred pieces of English and American Imperial

THREE PLY CARPETING,

of magnificent scroll and Gothic figures, imported and manufactured to order, some of which cannot be found at any other establishment in the United States.

SALES ROOM No. 4, contains one hundred and fifty pieces of fine

INGRAIN CARPETING,

of splendid new patterns, at astonishing low prices, 2s., 2s. 6d., 3s., 3s. 6d., and 4s. per yard.

SALES ROOM No. 5, displays a wonderful variety of English DRUGGETS, of 4 yards wide; also, 3,000 yards of Druggets, of ¼, 2 and 3 yards wide, at 3s., 3s. 6d., and 4s., 5s., and 6s. per yard. Also, magnificent Mosaic and Axminster HEARTH RUGS, and 1,000 TUFTED RUGS at 20s. each.

SALES ROOM No. 6, is fully stocked with every variety of Striped and Figured STAIR and HALL CARPETING at 2s., 2s. 6d., 3s. to 6s: per yard. Also, English Tapestry, Brussels and Velvet Stair Carpet, at 7s., 8s., 9s. and 10s. per yard.

SALES ROOM No. 7.—Royal Velvet, Axminster, Tapestry and Brussels Carpeting, imported from the celebrated English manufactories of John Crossley & Son, and Henderson's, expressly for our city trade.

Also, MOSAIC CARPETS of one entire piece, the size 16 feet by 21, and 12 feet 8 inches by 17 feet, worth $350.

SALES ROOM No. 8, are the PATENT TAPESTRY INGRAIN CARPETS, exhibited at the World's Fair, and to be exhibited at the New York Crystal Palace.

Also, Window Shades, 6s., 8s., 13s., 20s, to $10 per pair; Table Covers, Plated and Brass Stair Rods, English Sheepskin, Adelaide and Tafted Parlor Door Mats.

Also, White and Checked Matting, 4-4, 5-4, and 6-4, and Cocoa Matting. All the above goods will be sold 20 per cent. less than any other establishment in the United States.

HIRAM ANDERSON, No. 99 Bowery.

N.B.—Families and Merchants visiting the great metropolis, will find it much to their advantage to examine this enormous stock

UNION AGRICULTURAL WAREHOUSE AND SEED STORE.

RALPH & CO.,

23 *FULTON STREET, New-York,*

Offer for sale a large and select assortment of Agricultural and Horticultural Implements, consisting of Plows and Castings, Corn Shellers, Straw Cutters, Horse Powers, Thrashers and Separators, Fanning Mills, Grain Cradles, Scythes and Snaths, Grain Mills, Sugar Mills, Root Cutters, Sausage Cutters and Stuffers, Ox Yokes and Bows, Rakes, Hoes, Hay and Manure Forks, Spades, Shovels, Carts, Waggons, Wheelbarrows, &c.

Field, Garden and Flower Seeds.—A large variety. **Fertilisers**—Peruvian Guano, Sup. Phosphorate Lime, Bone Dust, Poudretts, Charcoal Dust, Plaster, &c.

Manufacturers of SCHNEBLY'S Reaping and Mowing Machine; **DANIEL'S** Hay, Straw and Stalk Cutters. Agents for the sale of Wm. Hovey's Patent Straw Cutters. A descriptive catalogue will be sent on application by mail.

Oct. '53, 1y.

MARBLEIZED IRON MANTELS,

COLUMNS, TABLE TOPS, &c., &c.

THE SALAMANDER MARBLE CO.,

Continue to present to the public the largest and best assortment of Marbleized Iron manufactures. For richness and delicacy of coloring, correctness of imitation, and beauty of finish their articles are unsurpassed by any others that have yet been offered. They have the testimony of numerous Architects, Builders, and others as to their value, and in addition the award of a **GOLD MEDAL** by the American Institute, and the highest prize **MEDAL** at the Fair of the Metropolitan Mechanics' Institute, held at Washington.

This material is in many respects superior to marble, whilst it is accurate as to representation, it sustains a higher polish, and is therefore more beautiful. In addition, it is unaffected by the action of acids or oils, and having an iron basis it is not likely to be injured or broken in transportation. Builders and others are invited to examine the stock of this Company, and their correspondence is solicited.

SILAS C. HERRING.

All communications may be addressed to the Financial and General Agent, JOHN RUSTON, 813 Broadway, New-York.

Oct., '53.

McFARLAND'S

IMPROVED FIRE AND BURGLARY

PROOF SAFES.

THE undersigned would respectfully call the attention of the public to the above unequalled safeguard, proof against the devouring element of fire, as well as the most skillful burglar.

To Merchants, Jewelers, and Bank Directors, we would only say, examine them and the proofs, and you will be convinced of their superiority over all others manufactured.

Our business is done in a plain straight-forward way, without resorting to humbug or large talk.

Below is one of the many testimonials we are daily receiving from all parts of the country, and speaks for itself. Messrs. Pond and Hitchcock's Oil Store was situated directly under the Pearl St. House, and was totally consumed in that great fire of Aug. 23d.

Our depot, where an assortment of all kinds and sizes are constantly on hand, is at

33 *MAIDEN LANE*,
2 doors from Nassau St. N. Y.
WM. McFARLAND & CO.

NEW-YORK, Aug. 23, 1853.

Messrs. McFarland & Co:

GENTS:—It affords us pleasure to inform you that the Fire and Burglar Proof Safe we purchased of you, preserved our books and papers at the disastrous fire of the Pearl-st. House, last evening, in the most perfect manner. Although it was covered throughout the fire, with burning Rosin and other oils, and directly under a broken Gas Pipe, in the most intense heat, it remained true to its name, and its contents, when taken out, were not even scorched, and hardly bore the smell of fire. To any one in want of a Superior Safe, a perfect safeguard against fire, we cheerfully recommend your manufacture, having had a personal experience of their excellence.

Yours truly,
POND & HITCHCOCK.

Nov., '53, 1 year.

AMERICAN AND ORIGINAL.

THE

KNICKERBOCKER MAGAZINE,

EDITED BY LOUIS GAYLORD CLARK.

THE number for January, 1854, begins the FORTY-THIRD VOLUME of the KNICKERBOCKER MAGAZINE. In July last we commenced giving sixteen pages more in each number, thus adding Two Hundred pages a Year to the work.

Since the price of subscription has been reduced from FIVE to THREE DOLLARS a year, the circulation of the KNICKERBOCKER has been increased nearly four to one. In many places ten are sold where there was but one before, and through the year it has been steadily increasing. It is now offered as cheap as any of the Magazines, all things considered. Instead of making new and prodigious promises, we submit a few extracts from notices of late numbers, which we might extend to a number of pages.

'Those familiar with the Editor's monthly 'Gossip with his readers,' have doubtless, with ourselves, admired the perennial source of its plesant wit and joyousness. In this number 'The Gossip' holds on its way like some fair rivulet glancing and dancing in the sunshine of a May morning. We used to wonder how Mr. CLARK held out, expecting he must certainly 'snow brown' in the coming number; but this number gives no sign of exhaustion.—*National Intelligencer, Washington.*

'Pleasant, genial, delightful 'Old KNICK.!' Thy name is a suggestion of all things delectable; the sight of thy modest, fresh cover, a balm to spiritual sore eyes; a glance within thee, best antidote for the blues. Thou hast given to kindly humor, to piquant delineation, and to side-splitting fun, a 'local habitation,' without which they might go wandering over the domain of letters, calling now and then where a friendly door opened to them but refusing to be comforted for the loss of their old dear home.'—*Courier, Burlington Vt.*

'The great care evinced in the selection of articles that adorn its pages, is a sufficient guaranty that no contribution meets the eye of the reader but those which are known to be worthy of his perusal. When storms and wild tempests are sweeping o'er our hill-side village in these chill winter hours, and all is drear and desolate without, we ask for no more agreeable companion than the 'KNICKERBOCKER;' for while its contents impart valuable information, its sallies of genuine wit are a sovereign specific for all fits of the blues or attacks of the horrors, and time passes merrily on.'—*Democrat, Doylestown, Pa.*

'The KNICKERBOCKER has been and will be a fact of its own; a genuine living thing, all the more desirable now that the new crop of magazines, filled with articles pirated from English authors, makes fresh home creations more conspicuous and welcome.'—*New-York Christian Inquirer.*

'No one ever rose from the perusal of the KNICKERBOCKER a disappointed reader. Whatever may have been his anticipations, they have always been rewarded. When he took up a new number, he felt sure of a literary treat; it was no mere showy repast he was invited to. Did he seek the grave or didactic essay, the touching story, poetic gems, or the humorous tale, he was always sure of finding the object of his search. And then, besides, there was the 'Gossip' of Old 'KNICK.,' always looked to with eagerness, never put down except with regret that there were not more pages of inimitable random sketches—the *Knick*-nacks of that repast.'—*Courier, Natchez, Miss.*

A new Story by the Author of the "ATTORNEY," will commence in the December number.

THE FUDGE PAPERS, by Ik Marvel, Author of the Reveries of a Bachelor, Dream Life, &c., &c., will be continued regularly.

Rev. F. W. SHELTON, Author of Letters from Up the River, etc., will be a regular contributor.

FITZ-GREENE HALLECK has engaged to furnish poetical contributions from time to time.

The best talent in the country will be enlisted, and no expense or effort spared, to make the KNICKERBOCKER more than ever deserving of the first position among our original American Magazines.

TERMS.—Three Dollars a year, strictly in advance—there will be no deviation from this condition; Two copies for $5 00; Five copies, and upwards, $2 00 each. Booksellers and Postmasters are requested to act as Agents. Those who will undertake to procure subscribers will receive favorable terms. Specimen numbers will be sent gratis on application, post-paid.

INDUCEMENTS FOR CLUBBING.—The KNICKERBOCKER and Harper's, Putnam's, Graham's or Godey's Magazines will be sent one year for FIVE dollars; the KNICKERBOCKER and Home Journal, or any other of the two-dollar weekly papers published in New-York, Philadelphia, or Boston, for FOUR dollars a year.

A copy of the "ATTORNEY," or "HARRY HARSON," will be sent post-paid, to every person who will send a club of ten, and both works to those who send a club of twenty.

POSTAGE.—Two cents per number, prepaid at the office where the work is delivered quarterly in advance.

All remittances and all business communications must be addressed, post-paid, to

SAMUEL HUESTON,

139 Nassau Street, New-York